GAZETTEER OF THE SHAHPUR DISTRICT.

1917.

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PUNJAB
DISTRICT GAZETTEERS.

VOLUME XXX A

SHAHPUR DISTRICT

WITH MAPS.

1917.

COMPILED AND PUBLISHED UNDER THE AUTHORITY
OF THE PUNJAB GOVERNMENT.

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INTRODUCTION

The Gazetteer of Shahpur District was first compiled by Captain (afterwards Sir William) Davies, who carried out the Regular Settlement of the Trans-Jhelum tract. It was revised and largely re-written by Mr. (now Sir) James Wilson in 1897. The present edition is for the most part derived from Mr. Wilson, who, in turn, derived the historical sections from Captain Davies. The contents have however been re-arranged so as to conform to the model prescribed in Financial Commissioner's Standing Order No. 43, and statistics have been brought as nearly up to date as possible. As Mr. Wilson's Gazetteer gave a remarkably complete and interesting account of the district as it existed before the days of the perennial canal, and is now out of print, I have studied to reproduce in a slightly condensed form the whole of that account indicating by contrast the amount of progress made in the past twenty years. I fear that the new matter falls far short of the old in completeness and lucidity; for this I can only plead in extenuation the fact that I have had no official connection with that part of the district in which all the most interesting developments have come to pass, and have for that part had to rely entirely upon the courtesy of officers of various departments for my information. The result illustrates once more the rule that it is not good to put new cloth on to an old garment. I can only hope that my patch-work will serve its purpose till such time as the district comes under settlement as a whole, or is officially recognized as containing two districts in itself.

M. S. LEIGH,

Settlement Officer.

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CHAPTER I.—DESCRIPTIVE.

Section A.—Physical.

Name of district, derivation, definition and general description.

The Shahpur District takes its name from a small town near the river Jhelum, celebrated for its shrine of Shah Shams; it is one of the six districts of the Ráwalpindi Division, lies between north latitudes 31° 32′ and 32° 44′* and between east longitudes 71° 37′ and 73° 18′. It is bounded on the north by the Talagang Tahsíl of the Attock District and by the river Jhelum which separates it from the Pind Dádan Khan Tahsíl; on the east by Gujrát District and by the river Chenab which separates it from Gujránwála; on the south by the Jhang District; and on the west by the district of *Miánwáli. Its average length from east to west is about 96 miles, and its breadth from north to south* averages about 50 miles, but varies from 27 miles near the middle to 72 miles near the west boundary. According to the measurements of the professional survey the area of the district, including the rivers, is 4,791 square miles, while according to the *patwárís'* measurements the area including the rivers is 4,801 square miles. It is divided into two nearly equal portions by the river Jhelum, the western half constituting the Khusháb Tahsíl, while the cis-Jhelum portion is sub-divided into three tahsils also nearly equal in area, the Bhera Tahsíl to the east, the Shahpur Tahsíl in the middle, and the Sargodba Tahsíl to the south.

The district contains only two towns of more than 10,000 souls, *viz.*, Bhera and Khusháb with a population of 15,202 and 10,159, respectively. The administrative head-quarters are situated at Sargodha near the centre of the Canal Colony. Shahpur stands seventh in order of area, and eighteenth in order of population among the 28 districts of the Province. It comprises 4·95 per cent. of the total area, 3·5 per cent. of the total population, and 2·5 per cent. of the urban population of the British territory. The latitude, longitude, and height in feet above the sea, of the principal places in the district, are shown in the margin.

Town.		North latitude.	East longitude.	Feet above sea-level.
Bhera	...	32° 28′	72° 57′	645
Shahpur	...	32° 16′	72° 31′	600
Khusháb	...	32° 18′	72° 24′	600
Sargodha	...	32° 5′	72° 40′	610
Sakesar	...	32° 33′	71° 59′	4,992

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Physical features.

With the exception of that portion of the Salt Range, which is included in the north of the Khusháb Tahsíl, the whole of the district forms part of the western basin of the great Indo-Gangetic Plain, and lies almost entirely between 550 and 700 feet above sea-level, with a gradual slope towards the south-west of about 1½ feet in the mile, imperceptible to the eye. The Chenab and Jhelum rivers, crossing this plain on their way to the Indus and the sea, have worn for themselves wide valleys, some 15 or 20 feet below the general level, leaving between them a comparatively high-lying upland tract called the Bár, while beyond the Jhelum and between it and the Indus River is another wide expanse of upland, locally known as the Thal.

The Chenab river and its valley.

The Chenab river, locally known as the Chanháṇ, which forms the south-eastern boundary of the district for a distance of 15 miles, must, at some comparatively recent period, have flowed considerably to the west of its present bed. At a distance from it to the west, varying from 10 to 15 miles, a well-defined bank, known locally as the Nakka, separates its valley from the Bár uplands, and the tract below this bank is intersected in many places by sandy channels, small and large, which have evidently been occupied by the river at various periods, and are generally known as Budh or Budhi, *i.e.*, "old" branches of the river. The most marked of them, a hollow about ten feet below the level of the adjoining country, and in some places a hundred yards across, meanders along just below the high bank itself, and carries some local drainage in heavy rains, but is very seldom filled by spills from the river. Another, called the Jandra, which leaves the river below Midh, sometimes floods a small area on its bank and the Halkíwáh, which leaves the main channel just above the boundary of this district, is too deep to flood any land until after it enters the Chiniot Tahsíl. The annual inundations affect only a narrow fringe along the river, varying in width from two to six miles, and averaging little more than three; but owing to the sandy nature of the soil the moisture percolates to a considerable distance and benefits land in the neighbourhood of depressions which is not actually covered by the floods. The soil of the Chenab Valley is generally light and sandy and inferior in productive power to the richer loam of the Bár uplands and the Jhelum Valley. Moreover the percolation of canal water from the irrigated uplands has resulted in a serious amount of water-logging and efflorescence of alkali; the soil is therefore tending to degeneration. In the villages near the Nakka Bank, it is better than in those nearer the river, having a larger depth of loam above the river sand which underlies the whole tract. The deposits left by the annual floods

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The Chenab river and its valley.

of the Chenab are usually very sandy and much inferior to the rich silt brought down by the Jhelum and some of the other Punjab rivers. New alluvion has to be left uncultivated for some years before it consolidates sufficiently to be worth cultivating, and old land is apt to deteriorate. The minimum recorded discharge of the Chenab river at Chiniot is 335 cubic feet per second, and the maximum about 700,000 cubic feet per second during the great flood of 20th and 21st July 1893, but in ordinary years the discharge varies between 500 and 30,000 cubic feet per second. The river is at its lowest from November to February. It begins to rise in March and attains its maximum level in July and August after which it gradually falls. The mean gauge level at Chiniot is 584·4 in summer and 584·7 in winter. During the last 17 years its height has varied between 12·7 feet above the mean and 8·71 feet below it. Very little advantage was formerly taken of the annual floods in the way of making canals in this tract, which had never more than three small inundation canals irrigating in the best of years about 1,000 acres. Since the opening of the Lower Chenab Canal, with its weir at Khánki, practically the whole river discharge is diverted, in winter, and about 20 per cent. of ordinary flood discharge in summer. The opening of the Upper Chenab Canal is not expected to affect much alteration in these figures, as the surplus supply of the Upper Jhelum Canal will make good the extra loss.

During the last 20 years the river, which had formerly been trending towards the west, has swung back to its former position, and now follows closely the boundary between Bhera Tahsíl and Gujránwála. In the Chenab Valley the underground water-level is everywhere near enough to the surface to admit of irrigation from wells, and the well water is good and sweet. Near the river just outside the belt of cultivation which depends directly on the river floods, there is a belt of cultivated land thickly studded with wells, each of which is surrounded by a clump of fair-sized trees. The water-level here is from 13 to 20 feet below the surface. This area, which now depends primarily on the river for its prosperity, has been much restricted by the construction of the Khádir Feeder and Escape of the Lower Jhelum Canal, and a protective embankment at a distance from the river which varies from 2 to 8 miles. In the portion of the old Chenab Circle which is commanded by the Khádir Feeder, *i. e.*, in the tract about 5 to 10 miles from the river, the sub-soil water is between 13 and 19 feet below the natural surface. There are 15 villages in this belt, and 8 of these have

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The Chenab river and its Valley.

wells at work, irrigating 380 acres only, or less than 2 per cent. of the total area irrigated. Above the Nakka Bank the depth to water is between 21 and 17 feet, gradually decreasing as one approaches the Southern Branch of the Canal to 13 feet: in this tract 15 villages out of 24 have wells at work, with an area of 885 acres, or less than 5 per cent. of the total area irrigated. Thus it will be seen that, except for the narrow strip between the river and the flood embankment, the Chenab Circle has lost its old characteristics, and been caught up in the great canal system which has spread all over the once-open uplands known as the Bár.

The Bár Uplands and the Lower Jhelum Canal.

In 1897, Mr. Wilson described the area dividing the valleys of the Jhelum and Chenab in these words :—

The Bár Uplands.

"On ascending the Nakka Bank we find ourselves on the Bár Uplands, which stretch across about 20 miles to the similar bank which again dips down into the Jhelum Valley. A marked change is noticed in the character of the soil and vegetation. Instead of the sandy soil of the riverside we get a good strong loam, capable of growing excellent crops with sufficient moisture; but the water level is now at from 50 to 80 feet below the surface and the water is generally brackish and wells are few and far-between. A considerable area is cultivated with the aid of the drainage from the neighbouring higher ground, but by far the greater part of the Bár is still uncultivated, covered with a thick growth of shrubs which seldom attain a size worthy of the name of trees, and producing in good seasons an excellent crop of grass, which forms the sustenance of the large herds of cattle kept by the inhabitants of the sparsely scattered villages. Towards the south-west in the Shahpur Tahsíl, the soil gets in some places more sandy, in others more saline, and both trees and grass become comparatively sparse and stunted. The Bár Uplands, like the river valleys, while maintaining the same general slope towards the south-west, are here and there crossed by old river channels, winding and twisting across the country, and it is evident that at some period in the distant past the rivers must have wandered over this tract at a considerably higher level than their present channels. In the east of the Shahpur Tahsíl the plain is broken by the outcrop of detached hills, a continuation of the Kiránа Range in the Jhang District, the highest peak of which, standing about 1,000 feet above the plain, and crowned by a famous monastery, is a conspicuous object from any point within a distance of 30 miles. These hills, though only 40 miles from the Salt Range, are composed of quartzites and schists, quite unlike any rock found in that range, but of the same character as those forming the mass of the distant Arávalli hills; so that they appear to be an advanced outpost of the great Peninsular rock system, much older than the Salt Range and even than the mighty Himalaya within sight of which they maintain an undaunted front."

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The Bar Uplands and the Lower Jhelum Canal.

"In the south of the district the valley is 15 miles wide, and canals have not yet been constructed to irrigate land at any great distance from the river. The tract, locally known as the Ara, intermediate between the riverain proper and the Bár Uplands, receiving no irrigation directly or indirectly from the river and having a very scanty rainfall, is dependent for its cultivation almost entirely on wells, and as the underground water-level is from 30 to 55 feet below the surface, and the soil is hard and clayey and cannot be continuously cropped there is much less cultivation and very few trees, and in early summer when there are no crops on the ground the tract presents a bare desolate appearance."

Since then the face of the country has been completely changed by the construction of the Lower Jhelum Canal.

In place of open shrub-land and struggling wells it is now a great expanse of "squares" all fertilised by the silty waters of the Jhelum. The fields are all laid out with almost geometrical accuracy, in squares of 73 yards each way, and tree-planting is proceeding with fair rapidity. In a word the spacious hunting ground of the untamed cattle-thief has become a parcelled land of wheat and oil, of prosperous farmers and expert horse-breeders, of tidy villages and shaded water-ways.

The Lower Jhelum Canal

The canal takes out of the river at Mung Rasúl in Jhelum District, and, entering the Bhera Tahsíl on the north-east curves round to the south so as to form the boundary of the Shahpur and Gujrát Districts. The Main Line has its escape in the south-east corner of the Bhera Tahsíl, and has three main Branches—the Northern and Southern Branches and the Khádir Feeder—all of which flow westward and command the whole of the Doáb, except for a fringe in either valley. The Northern Branch throws off near Sargodha the Sulki Branch, which escapes into the Jhelum above Sáhíwál, and in turn throws off the Ghazni Distributary to irrigate the Ará tract. The southern end of the district is still the least prosperous, partly because it gets least rain, partly because the soil is either excessively stiff as in the Ará, or unduly sandy, as in the "Sobhága Jungle" and partly because supplies of water are naturally least certain towards the tail of the canal.

The Jhelum River.

On descending the northern edge of the Bár a bank some 10 or 15 feet high, known as the Danda, we find ourselves in the valley of the Jhelum, a tract somewhat similar in character to the valley of the Chenab, but much more fertile, better cultivated, better wooded and more thickly inhabited, owing no doubt to the richer quality of the alluvial silt annually brought down by the Jhelum. This river, the Vedasta and Hydaspes of the ancients, is now locally known as the Jehlam or Vehat, the

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The Jhelum River.

latter name being more common towards the south of the district. It rises in Kashmír and debouches from the hills at the town of Jhelum from which it takes its name. It then flows south-west for a hundred miles as far as the town of Shahpur, where it takes a sharp turn and then flows almost direct south to its junction with the Chenab. In winter the river shrinks into a narrow channel, sometimes not more than 200 yards wide with a normal minimum discharge of about 9,000 cubic feet per second, the lowest recorded discharge between 1890 and 1915 being 3,000 cubic feet per second. The average width in winter may be taken to be 300 yards, the average velocity about two miles an hour and the greatest depth from 5 to 10 feet. Almost every winter at least one sudden high flood (*káng*) comes down, due to heavy rain in the hills. Occasionally such a flood reaches summer-level, but it lasts only a day or two. During the last 25 years the level of the river has varied between 10 feet above and 8 feet below the mean*. Towards the end of March, when the snows begin to melt on the distant Himalayas, the river gradually rises, till in May and June it attains an average height of about 6 feet above its usual winter level with a breadth of about half a mile, and a normal maximum discharge of about 68,000 cusecs. When heavy rains fall on the lower hills, the river is liable to sudden freshets, sometimes rising as high as 12 or 13 feet above winter level, and giving a discharge of over 575,000 cubic feet per second. On such occasions the stream, over-leaping its banks, inundates the country for miles on either side, and then gradually subsides within its normal bounds. These freshets sometimes have a destructive effect, washing away valuable crops, or submerging land already under crop, but more frequently they are of incalculable benefit, by depositing a fertile silt over many square miles of country and leaving the land sufficiently moist to produce excellent crops with the aid of a scanty rainfall. In September the river generally subsides in good time to allow the land which has been moistened and fertilised by its floods to be sown with wheat for the spring crop, and seldom inundates that land again until the wheat crop has ripened and been secured. It is this adaptation of the river floods, dependent on the fall of snow and rain on far distant mountain

*The leading gauge-readings at Chak-Nizám Railway Bridge are these :—

Absolute maximum	... 675·93	Mean maximum	... 669·4 (June)
Absolute minimum	... 658·	Mean minimum	... 662·6 (December)

Mean annual discharge ... 666·5 (about 29,000 cusecs).

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The Jhelum River.

ranges, to the seasons in the plains, and to the needs of the wheat crop, which makes the land along the rivers within reach of their annual inundations such a fertile and valuable possession in this region of scanty rainfall. One peculiarity of the river Jhelum is that it rises earlier than the other Punjab rivers, probably because it is more dependent on the melting of the snows and less on the summer rainfall than they are. This is very fortunate, as the cold weather supply of the river is now apt to be much reduced by the needs of the two Jhelum Canals. Occasionally the entire flow is intercepted by the Lower Jhelum Canal at Rasúl, and only about 3,000 cusecs find its way back to the river by percolation. On these occasions the ferry contractors are apt to suffer considerable loss of custom, and the *inundation-canal* owners feel nervous for their early waterings.

The Jhelum Valley.

The Jhelum valley, which is little more than 2 miles wide where the river enters the district, rapidly widens until at Shahpur it is 12 miles and at Sáhíwál 15 miles wide. It is generally well defined by the Danda bank separating it from the Bár uplands on the one side, and on the other by a similar bank, known as the Dháh, above which lie the sandy plains of the Thal. Between these banks the river must have meandered at various times within a comparatively recent period, and the valley is intersected by winding channels in which the river must formerly have flowed, but which are now dry hollows, sometimes 10 or 12 miles distant from the present channel of the river. About Shahpur these old river beds are known as Didhár, and further south as Rín. One of the most marked of them cuts up the country immediately south-east of Shahpur; another, often called the Ráníwáh, runs along near the Danda bank forming the eastern boundary of the valley. At present, however, the river Jhelum hugs the western border of its valley pretty closely. In few places is the Dháh bank of the Thal more than 2 miles distant from the river, and in some places, as at Jaura and Hamoka, the stream is actually cutting away the high land of the Thal itself. The westward tendency of the river, which must have been going on for some centuries, is still in operation, though for the moment a temporary set-back is occurring opposite Khusháb. Since the regular settlement, some 55 years ago, more than 5,000 acres in the country to the south of Shahpur, which was then subject to river-floods, is now hardly ever flooded, and a large area of land, especially from Shahpur southwards, which was then on the west side of the main stream,

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The Jhelum Valley.

is now on the east side. The process results in ultimate gain, for the rich silt deposited by the river is much more fertile than the barren soil it cuts away.

In consequence of this westward tendency of the river, only narrow strips and patches of its valley are now found on its west bank, while to the east it has left behind it a wide level lowland of fertile soil, with abundance of sweet well water at a depth below the surface varying from 15 to 55 feet according to the distance from the river. Advantage has been taken of this store of moisture to sink numerous wells for purposes of irrigation; and during the 30 years that followed the British occupation several canals were constructed, both by the State and by private persons, to conduct the water of the river in the annual flood-season on to the land of the valley at a distance from the present river-bed, and lower down its course—a process rendered possible by the gradual slope of the country towards the south-west. So good are the soil and water, and so profitable is cultivation, that the Jhelum valley as a whole is much more densely populated than any other part of the district, and although it comprises less than a fifth of the total area, it contains much more than a third of the population of the whole district. Five of the six towns, which have more than 5,000 inhabitants each, are situated in this tract. Near the river the villages are thickly clustered, almost every acre is cultivated, the wells are numerous, and the country well wooded. More especially the tract from Miáni down to Shahpur, which is now fully irrigated by canals and wells, wears an air of great prosperity; and when riding through it on a spring morning one's eye is delighted with an endless expanse of waving green wheat, broken only by the wells and villages, each with its clump of shady trees.

The Thal desert.

On leaving the immediate neighbourhood of the river Jhelum and ascending the high bank which bounds its valley to the west, one suddenly plunges into a wilderness of sand, which extends westward for some 30 miles to the boundary of the district, and beyond that about as far again to the edge of the Indus valley. This desert tract, known as the Thal, which occupies almost the whole of the Sind Ságar Doáb, between the rivers Jhelum and Indus, forms a marked contrast to the level loamy Bár soil of the uplands on the other side of the Jhelum. Although it appears to have a somewhat similar substratum of hard, level soil, its surface is covered by a succession of sandhills with a general north and south direction, one following the other like the waves of an angry sea. Between the hillocks the harder subsoil

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The Thal desert.

appears in strips and patches, which are in some places of considerable extent (*patti*) but the general appearance of the country is that of a sandy rolling prairie, covered in years of good rainfall with grass and stunted bushes, but in seasons of drought, which are of frequent occurrence, little better than a desert. Trees are small in size and of rare occurrence, the underground water is from 40 to 60 feet below the surface, and generally brackish, irrigation from wells is almost unknown, the villages are few and far between, and the scanty population subsists largely on the produce of the flocks and herds which wander from place to place in search of grass.

Ten years ago the only cultivation consisted of small patches of cheap millets and pulses, or very inferior water melons. But it has since been discovered that excellent gram crops can be raised in an ordinary winter, and year by year larger areas are devoted to raising them ; the change from pasture to agriculture as the principal means of livelihood is going on apace. The resulting development of the land is, of course, over-shadowed by the brilliant success of the Lower Jhelum Canal, but is none the less remarkable.

The Mohar.

The sandy hillocks of this once desolate region end somewhat abruptly at a distance of 7 or 8 miles from the steep escarpment of the Salt Range which bounds the horizon to the north. The tract between the desert and the hills is a flat plain of hard soil, much of it impregnated with salts and producing hardly even a bush or a blade of grass. It is known as the Chhachh, and is the favourite haunt of the mirage. Near the base of the hills, however, the character of the soil changes. The mountain torrents, in the course of ages, have brought down immense quantities of detritus from the sandstone and limestone rocks of which the upper surface of the range is chiefly composed, and have covered the nearer portion of the salt and sterile plain with a fertile soil sloping gradually outwards from the base of the precipitous hills and requiring only a sufficiency of moisture to make it very productive. In years of favourable rainfall the torrents rush down from the gorges and spread in deltaic fashion over the moraines they themselves have formed, being brought under control soon after they leave the hills by an elaborate system of embankments erected and maintained by the industrious peasants. The most important of these torrents are the Vahi, which drains a large area in the Salt Range as far west as Bhukhi and Uchhala and debouches on to the plains near the village of Katha ; the Surakka which gathers water from

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The Mobar.

near Khura on the one side, and from near Jahlar on the other, and irrigates the fine estates of Jabbi and Dhokri; and the Dhoda which, after receiving the drainage of Sakesar and the hills around Amb, fertilizes the lands of the border village of Kiri Golewáli. But of the many gorges through which the drainage of the Salt Range finds its way into the plains only four hold a constant supply of water (*jé*). The small stream which flows throughout the year in the bed of the Váhi torrent is utilised for irrigation and other purposes at Sodhi and Katha; another at Kund does little more than afford drinking-water to the village and irrigate the public garden at Núrewála and the streams which trickle down the beds of the Dhoda and Surakka torrents are so salt as to be quite undrinkable. The scarcity of good water is one of the marked characteristics of this part of the district. Much good work might be done in the way of conducting down to the villages water from springs in the hills by a District Officer who could capture the enthusiasm of the villagers sufficiently to prevent them from fighting about the water when it was brought to them. The subsoil everywhere is so thoroughly impregnated with saline matter that all attempts to obtain drinkable water by means of wells have failed; and the inhabitants are dependent for their water supply on the springs which here and there trickle from the rocks, sometimes far up in the hills, or on ponds excavated so as to catch some of the drainage water in times of rain. When these ponds dry up, as they generally do in summer, the people and cattle are often put to great straits and have to rely on shallow borings, from which they scoop the almost palatable surface-water, or else to go long distances to obtain a supply of water sufficient for their daily wants. Still the land immediately along the foot of the range (Mohar) is so fertile when irrigated by the hill-torrents that a large population inhabits the tract and derives a living from agriculture. While the main village is usually situated at the foot of the range, there are generally a large number of detached hamlets (*bhán* or *dhok*) out in the plains or up in the hills, in which the people live while their crops are ripening in the fields near by. Their prosperity, dependent as it is entirely upon a very uncertain rainfall, is more than usually precarious.

The Salt Range.

The Salt Range forms the southern boundary of the rugged plateau extending from Sub-Himalayas southwards over the greater part of the Ráwalpindi and Jhelum Districts. After running from near Jhelum in a south-west direction parallel to the course of the river, and at a distance from it nowhere greater than 12 miles, it suddenly, at a point nearly opposite the town of

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The Salt Range.

Khushâb, turns to the north-west. It then soon culminates in the peak of Sakesar, from which it immediately dwindles into a low narrow ridge, and at the same time turns still more to the north till it crosses the Indus near Kálábágh. The most southernly corner of the range, formed by these changes of direction, lies in the Khushâb Tahsíl of the Shahpur District, to which has been allotted a length of 47 miles of the highest portion of the chain. Here its southern edge rises precipitously from the level plain of the Sind Ságar Thal (which lies about 700 feet above sea level) to a general height of some 2,500 feet, with several peaks reaching to over 3,000 feet, the Sakesar hill itself, the highest point in the whole range, being 4,992 feet above the level of the sea. On the north side, however, it slopes much more gradually towards the Talagang plateau, which lies some 1,800 feet above sea level. When it enters this district from Jhelum, the range consists of two parallel ridges running east and west at a distance of 8 miles apart. These soon bend towards each other and are connected by a confused mass of smaller ridges about Sodhi; then they open out to a distance of some 16 miles across, and again suddenly narrowing meet in the Sakesar hill. These external ridges thus include within them several high-lying valleys with a general height above sea-level of from 2,000 to 2,500 feet, divided from each other by numerous ridges, generally long and narrow, and almost all running east and west parallel to the general direction of the range. Of these valleys much the most important is the Sún, a land-locked plain immediately to the east of Sakesar with a length of 14 miles and a maximum breadth of 4 miles. The surplus drainage from the hills surrounding this valley, finding no outlet, collects in the Uchháli lake (*Kahár*), sometimes called the *samundar*. The area of this lake, which is at present (1915) 2,133 acres, varies with the seasons. At regular settlement, about 1863, it covered 1,425 acres; in 1890 after a dry season its area was 1,128 acres, and in 1892, after the heaviest rainfall within living memory, it extended over 2,550 acres, and submerged a large area of cultivated land round its margin. Its water is salt, and in drying up exhales a strong briny odour; but the water of wells dug within a short distance of its margin is sweet and drinkable. A rough estimate was lately made of the cost of draining the lake into the Nammal Lake to the north by means of a tunnel through the intervening ridge, but the cost was found to be prohibitive. It would be a great advantage if this lake and that at Khabakki could be drained. Every wet year throws land out of cultivation, and even in a dry year the land from which the lake recedes is so soured by saline deposits that it is of very little use for

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agriculture. It is believed that the wells are fed from sources which would not be affected by the lowering of the lakes' surface. There are within the Salt Range a number of other rock-bound basins, the lowest parts of which are covered with water after rain; but the only two containing perennial lakes are one at Khabakki, the area of which under water was 260 acres in 1863, 146 acres in 1890, 676 acres in 1892, and 595 in 1915; and the other at Jáhlar, the corresponding figures for which are 44, 46, 84, and 69 acres. The other hollows apt to be flooded are Khutakka (404 acres), Pail (31), Bhadrár (145), Mardwál (118), Ugáli (100) and Shakarkot (49), but they generally dry up in sufficient time to allow wheat to be sown. The figures given are the areas submerged after heavy rains of 1892, and should similar floods recur it will probably be found necessary to remit the revenue of the submerged lands as was done on that occasion. The rainfall of the northern ridge drains northwards on to the Talagang plateau, while that of the southern ridge finds its way through numerous picturesque and precipitous gorges southwards on to the Sind Ságar plain.

Soil of the Salt Range.

The soil of the valleys formed by the gradual disintegration of the limestone and sandstone rocks of the hills above is exceedingly fertile and its powers are being constantly renewed by fresh deposits brought down by the torrents. It does not vary much in general character throughout the tract, except that in Jaba and other villages to the north-east, which are bounded on the north by a range of sandstone instead of the usual limestone, the soil is more sandy and less fertile than in the villages to the west. Its productive powers, however, differ greatly from village to village and even in the same village, according as the situation of the field places it more or less in the way of intercepting the water and the fertilizing deposits brought down by the torrents. Hence the very elaborate system of embankments maintained by the industrious peasants, the result of which is that the slopes of the valleys have been gradually worked into a succession of terraces, one below the other, and that in some cases the dams are so strong and so well designed that the natural channel of a large torrent remains perfectly dry, and even after heavy rainfall on its catchment area in the hills, the whole stream is turned on to the ridges on either side and passing gradually down from terrace to terrace irrigates a large area of comparatively high land which would otherwise remain dry and almost unculturable. Several instances of this may be seen on the way from Uchháli to Naushahra. The fertile soil of the valleys thus irrigated supports a large population, and their villages, situated at no

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great distance from each other, may be seen nestling at the foot of the hills or clustered on the ridges.

Scenery of the Salt Range.

Unfortunately for the beauty of the landscape, the Salt Range peasants think their land too valuable to grow trees, and the valleys are almost bare except for small clumps of trees round the few wells. The southern face of the range presents a forbidding aspect towards the Thal, its ragged and broken cliffs, its distorted strata and huge detached masses of rock telling plainly of the violence of the commotion which attended its birth. This effect is heightened by the absence of vegetation due to the steepness of the hills on this side and the want of sufficient soil and moisture. The gorges, however, which pierce the range in several places, have a certain grandeur and beauty of their own. The most picturesque of these is that at Sodhi where a stream of pure sparkling water dashes over great boulders between precipitous cliffs fashioned by rain and frost into shapes suggestive of a row of Egyptian gods. It is this stream which, rushing through a succession of gorges where it sometimes forms deep pools of clear water fringed by shady trees, passes under the holy shrine of Narsingh Phohár with its cascade and petrifying springs, and debouches on to the plain at Katha. From the top of Sakesar hill on a clear day a pleasing view is to be had in all directions. Looking eastward one sees at one's feet the fertile valley of the Sún with its lake, and the green line of trees which marks the road meandering like a huge snake away into the distance. Beyond, the smaller lake of Khabakki, and still farther off a reach of the distant Jhelum river, catch the eye. Southwards lies a confused mass of mountains beyond which under a dim haze the desert of the Thal fades away to the horizon. On a very clear day Kirána is conspicuous, rising abruptly from the plain. Westwards, the mighty Indus rolls his way to the sea, taking with him the waters of the Kurram river and bordered by the Suleman Range, with Shekh Budín and the Takht-i-Sulemán. Northwards lies the rugged plateau of Pakkhar and Talagang, beyond which may be seen the Himalaya Range above Murree, and if the sky is clear of clouds, the snow-clad summits of the Sufedkoh.

Geology.

In barest outline, the geology of the district shows three distinct systems—the Kirána group of hills in the south, the Salt Range on the north, and the alluvion of the Sind Ságar and Jech Doábs in between. The Kirána system shews an uniclinal structure with northerly dip, and consists of dark-coloured and quartz-veined beds of coarse brown ferruginous sandstone, greenish quartzite and silicious clay-slate, and appears to be like the Delhi

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ridge, a far-flung outlier of the Aravalli system. In age it is not later than Lower Silurián, and is probably Cambrián or pre-Cambrian. It contains no fossils, but small specimens of Pyrolusite or peroxide of manganese are found in small cracks while numerous white quartz veins contain masses of rich hæmatitic iron-ore or limonite and a curious carbonate of lime and iron.

The Salt Range enters this district from Miánwáli at Sakesar and runs along the entire northern boundary in a curve, which passes somewhat north of east into Jhelum District. The range as a whole owes its existence and its sinuosity to the lateral out-thrust proceeding from the greater mountain chains on either side. There appear to have been various periods of elevation and subsidence, the last elevation taking place subsequently to the upper tertiary period. There are indications of land to the south, as far back as the period of the earliest groups and again at various stages up to tertiary times. The general character of this range also is apparently uniclinal, the northern side of the anticlinal arch only being present. The southern branch of the anticline has been faulted out of sight by an over-thrust dislocation. The northern slopes show fairly regular disturbance, and constant northerly dip, while the southern slopes are strongly broken, dislocated, and precipitous—a fact which may be attributed partly to meteoric denudation facilitated by the perishable nature of the underlying salt and gypseous marl, and partly to true faults, which are generally in directions oblique to that of the range, and frequently coincide with marked physical features such as the Narsingphohar, Surakka, and Amb ravines. The plateaux contained between the northern and southern slopes consist of a series of markedly anticlinal billows enclosing alluvial basins, three of which drain into the salt lakes of Uchhali, Khabekki and Jahlar.

The principal stratigraphical formations found in this district may be arranged in sequence, from the top, as follows :—

(1) Post-tertiary conglomerates and superficial deposits.

(2) (3) (4) Tertiary sandstones of the Miocene period, containing mammalian bones, crocodilian remains, and fossil wood.

(5) Nummulitic limestone, of Eocene age; this formation caps the higher hills, and is rich in large gasteropods, bivalves, echinoderms and many other similar fossils.

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(6) Soft green-brown and olive sandstones, conglomerates and dark shales, of the Cretaceous period, containing terebratulæ and bivalves: this group is confined to the tract east of the Narsinghphohar gorge.

(7) White and red soft sandstones, yellowish and gray limestones and yellow marls of the Jurassic period, containing ammonites, belemnites, etc.: this group is found to the west of the Kathwai stream.

(8) Limestones, sandstones, shales and clays of the Trias, containing ceratites, gasteropods, and bivalves.

(9) The "Productus Limestone" of Permian age, containing productus, spirifera, bellerophon, goniatites and many other fossils, including some of the earliest known ammonoids with complex sutures (*Cyclolobus* and *Medlicottia*).

(10) Granular, strongly bedded sand-stones surmounted by pale-lavender clay, and underlaid by a remarkable boulder-bed of glacial origin, approximately Upper Carboniferous in age, the equivalent of the Talchir boulder-bed of the Gondwana formation of Peninsular India.

(11) Black and dark gray argillaceous beds of the Cambrian period are only found to the east of the Sángla torrent in Nalli; they have been dated by the discovery of Obolus and siphonotrata in the Jhelum District.

(12) Purple sand-stones, which are unfossiliferous and of doubtful age.

(13) Gypseous red salt-marl with masses of rock-salt underlies the whole range, and is probably pre-Cambrian. The marl is entirely unfossiliferous.

The conformity or rather parallelism of the strata is as a whole decidedly well-marked, but faulting and weathering have in very many places brought formations of very different antiquity into juxtaposition. In addition to the rocks enumerated above, mention must be made of the calcareous tufa which is widely distributed, and is still in process of formation at a spring near Narsinghphohar where twigs and leaves are petrified with astonishing rapidity. It is remarkable that a rock so lightly constructed should, when used for building purposes, withstand the ravages of time as it has done in the ancient masonry of Amb and the numerous tombs that surround the lakes. For a more detailed description of a range of great interest to geologists the reader must refer to Mr. A. B. Wynne's Memoir,

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(Volume XIV of the Memoirs of the Geological Survey of India), which gives a most lucid and informing account of all points of interest.

The remarkable fossils from these hills have been described by Dr. Waagen in the "Palæontologia India."

The alluvion of the Doábs consists of an alternation of clays and sands which are only of interest to well-borers.

Botany—Trees.

The characteristic trees and shrubs of the Bár uplands are the *van, kari, jand* and *malla*, together forming the jungle with which the uncultivated lands are generally covered. The *van* or *jal* (*salvadora oleoides*), with its leaves something like the mistletoe, often forms a dense bush, such as cattle-thieves like to find for the concealment of stolen cattle. Camels, goats and sheep browse on its leaves, and its wood is used for fuel, but burns with an unpleasant smell, and leaves a great deal of ash. The sweet berry-like fruit (*pílu*) is very generally eaten by the poorer classes, great numbers of whom, especially the women and children, go out daily in June into the jungle and form a sort of picnic party, returning in the evening laden with fruit. In dry seasons the *pílu* is especially abundant, and if the price of grain is high, numbers of the poor live almost entirely on *pílu*, camping in the jungle for days so as to be near the supply. From the number of cases that arise in connection with it, *pílu* gathering seems to be considered a favourite opportunity for flirtation. The *kari* (*capparis aphylla*) has hardly any leaves, but when covered in April with its numerous brick-red blossoms gives colour to the landscape. Its wood is used for roofing, and makes a good fuel for burning bricks. Its fruit when unripe (*dela*) is used to make pickles, and when ripe (*pinju* or *dela*) is eaten, especially in times of scarcity. The *jand* (*prosopis spicigera*), sometimes a mere bush, but often attaining a height of 10 or 15 feet, gives an excellent fuel used for locomotive engines and other purposes. Its leaves and pods (*sanggri*) form a good fodder. The leaves of the *malla* (*zizyphus nummularia*) are also an excellent fodder, its berries are eaten in times of scarcity and its thorny twigs are much used for making enclosure-hedges, and make a good fuel.

In the river valleys the most numerous trees are the *kikkar* and *táhli*, which are very largely grown especially on cultivated land. The *kikkar* (*acacia arabica*), though said not to be indigenous in the Punjab, has taken very kindly to the soil, and springs up whereover there is a little moisture in a marvellous manner, being often self-sown. The young trees are apt to be

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killed by hard frost, but can stand it after the first year or two. It is a quick growing tree, often reaching 15 feet in five years. Its leaves make an excellent fodder and in times of drought the *kikkar* trees are ruthlessly lopped to save the cattle. Its pods are greedily eaten by goats and sheep. The timber is used for all sorts of purposes, and especially for agricultural implements, and it makes an excellent fuel. Altogether the tree is the most useful one we have, and many small groves of it are maintained by the better class of landowners.

The *táhli* (*shisham—dalbergia sissoo*) has been planted in great numbers along roads and canals and several groves of it have been formed in the canal-irrigated tracts and near the rivers. Many of the wells too have small plantations of *táhli*, the result of an order issued at regular settlement, requiring the owners of every well to plant a few trees about them. Its leaves are good for fodder and its timber is excellent for almost all purposes. The *táhli* stands next in importance to the *kikkar* among the trees of the district.

The *shiríh* (*siris—albizzia lebbek*), with its fragrant flowers and rustling pods, is found chiefly along the roadsides. A small grove of the tall, pale, ghostly *albizzia procera* adorns the old head-quarters station.

The *ukáh* or *koáh* (*farásh—tamarix articulata*), with its gnarled trunk and needle-like leaves, is fairly common and does not require so much moisture as most other trees. The *ber* (*zizyphus jujuba*) is very common on the roads and in the fields and its fruit is much appreciated. It is often covered by a curious leafless parasite (*nidhári*) used as a medicine. Groves of stunted *chhachhra* (*dhák—butea frondosa*), with its large scarlet flowers, are found in the north corner of the Bhera Tahsíl.

Arboriculture on the Lower Jhelum Canal has largely specialized in the production of *kikkar* and *táhli*, but in the Civil Station at Sargodha the advantages of variety have not been wholly overlooked.

In the neighbourhood of wells may be seen the *sohánjna* (*moringa pterygosperma*), with its corky bark, pollard head and bunches of white flowers, the *lasúṛa* (*cordia myxa*), with its bright flowers and edible fruit; the mulberry (*tút—morus alba*), the fruit of which also is much appreciated. The date-palm (*khajji—phœnix dactylifera*) is common only in a few places on the Jhelum, and especially at Sada Kamboh above Shahpur and at Majhoka and Khai near the Jhang border. Its leaves are

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made into mats and baskets and its stems are useful for water channels. The fruit is not particularly good, but fetches good prices, especially the produce of a particular group of trees at Khai, called the *musallin*. An attempt is being made to interest the villagers in the cultivation of improved classes of date-palm. The indigenous stock is rapidly deteriorating. Specimens of the *bohr* (banyan—*ficus bengalensis*) and *pipal* (*ficus religiosa*) are met with chiefly near towns and often owe their origin to the pious care of Hindus; there are some old trees of both kinds near the ancient town of Takht Hazára on the Chenab.

Fruit trees of all the ordinary kinds have been much cultivated both by the District Board and by private persons, and there are good gardens and orchards near all the towns and larger villages. The fruit produced, however, is as a rule of inferior quality.

Shrubs and plants.

In the flooded lands along the rivers *lei* or *pilchi* (*tamarix gallica* or *dioica*) springs up in considerable thickets and is used for wattling, baskets and roofs. The *akk* (*calotropis procera*) is very common in sandy soil, but is of little use. Even the migratory locusts do not touch it, apparently dreading its acrid milky juice; but it has a resident locust of its own and is sometimes eaten by goats. The *khár* or *sajji* plant (*salsola Griffithsii*) and its uses are described in Chapter II, Section D. Allied to it are the *lána* and *láni* (also *salsolas*) which are much appreciated as grazing for camels, and are found in barren saltish soils at a distance from the river. The camel-thorn (*jawáha—alhagi maurorum*) is most noticeable as a thorny weed among the wheat. Near the river the flooded lands are much infested by a thistle-like weed called *leha*, and another thorny weed called *pohli*; and well-irrigated lands, especially when the soil is poor or the cultivation bad, suffer much from an onion-like weed, the *bhukat*, which springs up with the crop and chokes it; the *harmal* (*peganum harmala*) is another common weed on cultivated ground. The *bhakkhra* (*tribulus alatus*) has a woody spiked fruit which is sometimes made into flour by the poor in famine times; the *tándla*, a tall weed, is eaten by cattle and sometimes as a vegetable by men.

Vegetation of the Thal.

The few trees to be found in the dry and sandy Thal are chiefly *jand*, which is found in groves protected by the reputation of some departed saint; stunted *kikkar* rarely found round ponds, and a grove of *ber* trees round the town of Núrpur, which are specially protected by a clause in the village administration paper. The characteristic bushes of this region are the *lána*, *akk*, and *harmal* which have already been described; and the

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phog (*calligonum polygonoides*), a good fodder plant, little found except in Rakh Núrpur; *búi* (*pauderia pilosa*), a low whitish plant with flower heads like catkins; *khipp* (*crotolaria burhia*), sometimes used for making ropes for temporary use; and the *tumma* or *kartumma* (*citrullus colocynthus*) with its trailing stems and beautiful green and yellow orange-like fruit scattered in profusion over the sand-hills. Their taste is very bitter, but goats eat them and a medicine for horses is made from them to prevent indigestion.

Vegetation of the Salt Range.

The Salt Range has a vegetation of its own, very different in character from that of the plains (*see* Dr. Stewart's Salt Range Flora—Agri-Horticultural Society of India's Journal, Volume I, Part I, new series). The southern aspect, with its steep escarpments, is generally almost devoid of vegetation, but the northern sides of the hills which have a more gradual slope and retain more soil and moisture are covered, though scantily, with trees and bushes. Among the most characteristic trees are the *phuláh* (*acacia modesta*) with its delicate leaves and little yellow globes of blossom; the wild olive (*kau* or *kavva—olea cuspidata*) with its glossy deep green foliage, often seen growing out of the cleft of a bare rock; a species of oak (*vari—quercus incana*); the wild fig (*khabári—ficus carica*) with its edible fruit; the *lahúra* or *rahúra* (*tecoma undulata*) with its beautiful large, bright orange-coloured flowers and useful timber; the *kulár* (*bauhinia variegata*) with its large purple or white flowers; the *dhamman* (*grewia vestita*); the *vatamman* (*celtis australis*) with an edible fruit; the *kangar* (*pistacia integerrima*); and in the rocky torrent beds, the oleander (*kanhíra—nerium odorum*) with its poisonous leaves and rose-coloured flowers. Among the trees which have been introduced lately with success are the mulberry (*tút—morus alba*), the *dhrek*, *tánd* or *bakain* (*melia azadarach*) with its strong-scented lilac flowers, the poplar (*shufaida—populus alba*), willow (*baint—salix*), *chíl* (*pinus longifolia*) and eucalyptus; and in the gardens at Sodhi and Sakesar, the pomegranate, peach, *loquát*, apricot, almond, and other fruit trees. The leaves of the *phuláh* and wild olive form good fodder for cattle in times of drought, and their wood makes excellent timber, that of the *phuláh* being much used for agricultural implements and that of the wild olive for making combs and walking-sticks. The mulberry and *dhrek* (Persian lilac) have firmly established themselves in the popular favour, and some recent experiments in silk-worm rearing hold out hopes that the former tree may prove a welcome source of profit to the villagers. A peculiar shrub found chiefly on Sakesar is the

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dwarf palm (*pattha—chamærops ritchiana*), from the leaves of which baskets and excellent matting are made. Among the shrubs that clothe the hillside, the most common are the *vahekar* (*adhatoda vasica*), *santha* (*dodonæa viscosa*), the wood of which is much used for roofing purposes, and the evergreen box (*pappar—buxus sempervirens*), the wood of which (*chikri*) is manufactured into combs. Ivy and ferns are also found in moist places; and on the dry rocky slopes a useless plant called the *awáni* (*ballota limbata*) affords an easy opportunity for a joke against the Awáns, who are the dominant tribe in the Salt Range. On Sakesar a very common plant is the *masteára* (*scutellaria linearis*), an infusion of which is useful for rheumatism; and the rennet plant (*withania coagulans*) is also to be found. Reeds (*nár*) grow in moist places along the torrent beds, and are used for thatching, for pipe-stems and for mouth-pieces for musical instruments.

Grasses.

Among the most common grasses of the Bár are the *khabbal* (*cynodon dactylon*), the *dúb* of Hindustán, an excellent fodder for cattle and horses; the *chhembar* (*eleusine flagellifera*), much the most common grass of all, eaten readily when green, when dry it is called *bhuttha;* the *sawák* (*panicum colonum*) which is also cultivated in the riverain and affords an edible seed; the *murak* which springs up very quickly in hollows after rain, but is of little substance, when ripe it is called *díla;* the fragrant *khávi*, of a reddish colour, not eaten by cattle except in hard times, commonly used to strew on the floor of mosques, when it blossoms it is called *dor* and when dry *kurak;* the *palwáh* (*andropogon annulatum*), a tall grass good for cattle but not for horses; the *dháman* (*pennisetum cenchroides*), perhaps the best of the milk-producing grasses; the *dabhh* (*poa cynosuroides*), a poor fodder grass, used for making ropes; the *khirmadhána*, a tall fodder grass; the *barúa*, found chiefly in cultivated ground; the *dágur* which grows best under the *ván* tree; the *surála*, a tall red grass; the *garham*, a tall fragrant grass, not good for cattle; the *lúnak*, a tall, graceful and useful grass with a saltish flavour; the *panni* (*andropogon muricatum*), a tall coarse grass, only eaten by cattle when green, the roots of which are the *khas* of which *tattís* are made; from the grass itself sieves and screens are manufactured; the *markan*, a small grass sprouting in the cold weather, which gives its name to a famine year (1890 *Sambat*, 1833 A.D.) because it seeded very plentifully in that year and its seeds were much consumed by the famishing population; and the *chinkhi*, which grows in low tufts, the seed of which is also eaten in famine times.

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In the river valleys, besides the above grasses, the most important are the *sar* and *káh*. The *sar* (*saccharum munja*), a very tall grass, often reaching the height of ten feet or more with large feathery spikes of flowers, grows very readily on irrigated lands near the Jhelum. Indeed it often proves itself a nuisance on the banks of the canals and in grass-preserves, and large sums of money have been spent in the endeavour to get rid of it. In its proper place it is a most valuable grass and sometimes a small patch of it will be found cultivated near a well. The *sar* grass at Megha is annually sold at sums which during the five years ending 1892 varied from Rs. 400 to Rs. 1,070, and averaged Rs. 725, and considerable sums have at times been paid for the *sar* grass along the banks of the State Canals. The young shoots are readily eaten by cattle. The reed-like stems (*kána*) are used for thatching and for making chairs and stools; the thin end of the stalk (*tíli*) makes winnowing baskets and screens (*sirki*); and the sheathing petiole, after being burnt at the lower end and beaten with a mallet, yields a fibre (*munj*) which is twisted into ropes, and used for all sorts of purposes by the peasants. The *káh* (*saccharum spontaneum*) grows in the lands most subject to river floods and makes valuable grazing for buffaloes.

In the Thal the commonest grasses are the *chhembar* and the fragrant *khávi*, already described; the excellent *dhaman* is rare except in Rakh Núrpur. Clumps of the *sen* grass (*elionurus hirsutus*) are often to be seen; a coarse woody grass of similar appearance (*primisetum dichotomum*) is called *phittsen*; its long fibrous roots are collected by wandering families of Chúhras, who make from them brushes (*kuchchan*) used by weavers for sizing the warp and by house-wives to clean dishes.

In the Salt Range most of the grasses found in the Bár are to be met with; but the characteristic grasses are the *babhar*, a tall grass common on Sakesar from which are often made the ropes used to carry the pots on a Persian wheel, as such ropes stand the action of water well; the *phareo* and *khar*, good fodder grasses; and the *sureala*, a thorny-seeded grass of little use.

Zoology—Wild animals.

According to tradition tigers used to infest the Salt Range, but none have been seen there lately. Leopards and hyænas are, however, occasionally heard of in the hills, and wolves used to be pretty common, especially in the Bár jungle. During the five years ending 1911 the Government reward was paid for 20 leopards and only 3 wolves. The number of these animals is probably rapidly decreasing, for in the five years ending 1882,

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rewards were paid for 3 tigers, 11 leopards and 742 wolves. Jackals are numerous everywhere and do considerable damage to the crops, especially to maize and sugarcane. Pigs do a considerable amount of damage to crops in some villages near the river: porcupines are to be found in the Salt Range, but rarely in the plain portion of the district. Foxes and wild cats are found in the Bár jungle; the mungoose is frequently seen, and hedgehogs, rats and mice are common. The badger (*bijjú*) is commonly reported to be in the habit of digging into graves and feasting on dead bodies; indeed it is said to be able to make a dead body walk. Badger-baiting is a favourite amusement. Black buck are rare, but the ravine-deer is fairly common in the *Bár* and Thal and the lower slopes of the Salt Range. They were formerly much more numerous and old men tell how they used to run them down with relays of dogs in the clayey lands between the Thal and the hills after rain, when their feet stuck in the soft soil. The most interesting animal from the sportsman's point of view is the mountain-sheep or *ooriál* (properly *hureál*) which is similar to the moufflon of Corsica. It is found throughout the Salt Range right down to its base. Among its native rocks its agility is surprising. Though heavy-looking it can move at a very rapid pace and no hill-side is too steep for it. In this district, probably owing to the plentiful supply of good grazing, big horns are fairly common; 31½ inches is the largest of which there is any record, and horns of 27 or 28 inches are not unusual. A full grown *ooriál* weighs about the same as a black buck and when cleaned makes a heavy load for a strong hill-man. *Ooriál* may not be shot in the Salt Range rakhs except in accordance with licenses issued by the Deputy Commissioner. Hares are pretty common where the cultivated land adjoins the jungle, and some of the resident Maliks are fond of coursing them with greyhounds, more or less pure in breed; every precaution being taken that the hare shall not escape. The only wild monkeys in the district are a pair of *langúrs* which have been seen on Sakesar. In fact it seems probable that these animals were really stone-martens, which are locally known as "*langúrs*" and not uncommon near Sakesar.

Birds.

The district with its hill, desert, rivers and riverain still holds a fair amount of mixed game In the Salt Range *chakor* above 3,000 feet and *sissi* below are common. The gray partridge is found in many places but the black only here and there in the riverain. Blue pigeon abound, and round Sakesar the Himalayan Cushat (Palumbus Casiotis), the biggest of the pigeon tribe, breed in the summer.

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Zoology—Birds.

The pin-tailed sandgrouse breeds in the Thal, but the rest of the sandgrouse tribe are migrants and only stay for a short time from the end of November to the end of February. During that period the Thal in good years is alive with birds. A few of the painted, and pallas variety are seen, but the majority are Imperial sandgrouse; one of the marvels of nature occurs when occasionally, with the whole Jhelum and its branches to choose from, all the flights for many miles select one shallow spot in a creek to drink from. The first of the migrants are the cranes who have been noticed going high over Sakesar on August 12th. Both the grey crane (Grus Cinerea) and the demoiselle crane (Anthropoides Virgo) are seen: the former predominate. Along with the grey and barheaded geese who are seldom noticed until Christmas time, they feed not only by the banks of the rivers, but on the crops in the more sparsely populated part of the colony.

In the winter ducks of many kinds swarm on the rivers, on the lakes in the Salt Range and on ponds in the jungles. The teal, shovellers and smaller kind of pochards come early and stay late. The mallard like the geese turn up with the colder weather and some birds like the red-crested pochard are seen usually at the end of the season only. Snipe and bittern are not very common. The Hoobara bustard (Hoobara macqueenii) arrives before the sandgrouse in fair numbers. The lesser bustard (Otis tetrax) is occasionally seen, and on rare occasions the *Tog* or great Indian bustard (Eudpodotis Eudwardsi) may be seen, but seldom shot. Allied to the Hoobara is the Lesser Stone Plover (Oedicnemus crepitans) which lives in the same country and is excellent eating. The local name (*Kharwanak*) is applied also to the curlew (Numenias arquatus) which is also good eating, when river fed, and the large Stone Plover (Aesacus recurvirostris) which is not.

Quail come with the cranes at the end of August, in large numbers but in the night. They are almost the first to come and the last to leave. A few remain in the fields and bushes all the winter, but the majority travel on in flights down country to return in diminished numbers having paid toll to net, gun and hawk.

The order of departure is as follows:—the Imperial sandgrouse depart at the end of February. The bustards have disappeared a fortnight later. Cranes and geese leave as the grain ripens and are all gone before the end of March. A few duck remain till the first week of April. The quail can be shot in diminishing numbers up to the 3rd week of April, and then all shooting is at

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an end till the clamour of the clanging cranes is once more heard high over Sakesar.

Zoology—Birds.

Many other aquatic birds visit the district—cormorants, coots, ibis, stilts and waders of all kinds; and the scarlet flamingo (*bagg*) remains on the Salt Range lakes all the year round. Plovers and lapwings of several kinds are seen in open country.

The crow and the kite are ubiquitous, the great black raven is frequently to be met with in dry tracts, and sometimes the huge adjutant-bird (*lamdhíng*) is seen standing about in the irrigated fields. A dead bullock or camel soon attracts a number of vultures from the blue. Hawks, valuable for sporting purposes, are found in the Bár and Thal and fetch fabulous prices. In the irrigated tracts green parrots fill the air with their screeching, a golden oriole sometimes flashes through the trees, and the blue jays and scarlet-plumaged wood-peckers add gaiety to the scene. The paradise fly-catcher is generally to be seen in the garden at Sodhi : the Bee-eater is ubiquitous in the hot weather. Immense flocks of rosy pastors (*tilliar*), the hereditary enemy of the locust, visit the district in the hot weather, and the common house-sparrow is only too common at all times and places.

Reptiles.

Snakes are common especially perhaps in the Salt Range, the venomous kinds most frequently met with being the cobra (*phaniar—náia tripudians*), the karait (*sangchúr—bungarus cœruleus*) and the *eachis carinata* (*phissi* or *khapra*). On the average of the five years ending 1895, Rs. 70 were annually paid as rewards for the destruction of 435 venomous snakes, and 43 persons were reported as having died from snake-bite. During the five years ending 1914, 211 persons were killed by snake-bite, but no rewards for the destruction of poisonous snakes were paid : consequently no destruction of snakes has been reported since 1910. Crocodiles (*sansár*) may often be seen sunning themselves on the sand banks in the river beds, but rarely attack men or domestic animals. Lizards of various kinds are common. The small house-lizard (*kúnkirli*) catches flies upon the walls ; chameleons (*saddar*) and other tree-lizards scuttle up the trees, and several, including the great *goh*, live in holes in the ground. The *sahna* burrows in the Bár jungles and is often dug out by the Mussallís and jungle tribes and used for food. The skink (*reg-mahi* or sand-fish) is found in the sand-hills of the Thal ; with its tiny feet and glittering scales it looks exactly like a small fish, and is remarkable for the brittleness of its body and for the rapidity with which it disappears in the sand. The dried skink is much in

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Reptiles.

demand for medicinal purposes. Most dreaded of all is the *bindoa*, a small ugly spotted lizard found in the hills, whose bite is more venomous than the cobra's; hence the saying '*lare bindoa te khatto toa*' (if a *bindoa* bite a man, you may dig his grave). The little animal knows his reputation, for he does not always flee when pursued, but turns in a threatening attitude on his pursuers. However, when a specimen was sent to the Calcutta Museum it was found to be the *enblepharis modicularis*, allied to the *Gecko*, and not poisonous; and when attempt was made to verify alleged cases of its bite having proved immediately fatal, the evidence was not found to be such as to satisfy a scientific enquirer. But whatever be the truth of the matter, there is no doubt that the fear the villagers have for this lizard is real.

Fish.

In the rivers the commonest fish are the *ráhu* and *dhabra*, both of which go up to about 16 lbs. in weight, and the *mali* up to 30 lbs.; less common are the *mahsher* which goes up to 40 lbs., the *singhára*, up to 8 lbs., the *daula*, up to 10 lbs., a thorny-backed fish, *trekanda*; and a flat fish called *patri*. The best for eating are the *ráhu*, *mahsher* and *singhára*. Fish are very little eaten by the riverside population and sell at from six to ten seers for the rupee. They are caught in nets and basket-traps, and with hooks, chiefly by the *Malláh* (boatmen) and by Mehra (fishermen) from Pind Dádan Khan, who export a considerable quantity by train to Ráwalpindi and Jhelum. In the torrent beds of the Salt Range, for instance at Sodhi and Kathwai, a small minnowlike fish is found which makes fair eating.

Insects.

Locusts (*makri*) sometimes visit the district in destructive numbers, generally coming up from the dry south-west. In the spring of 1891 numerous flights of locusts, which were identified as the *Acridium peregrinum*, the great migratory locust of North-Western India, made their appearance in the Khusháb Tahsíl and deposited eggs in the Thal and along the foot of the Salt Range. Towards the end of April young locusts (*púng*) appeared in immense swarms and devoured every green thing, but fortunately the wheat crop which was unusually good was so nearly ripe that they did it very little damage. After destroying everything that was still green they ascended the Salt Range and poured upon its valleys like an invading army, attacking the ripening wheat and biting through the stalks so that the ears fell on the ground as if cut off by a sickle. The trees and bushes also suffered severely, almost the only kinds untouched being the *dhrek* or *bakain* (*Melia azadarach*) and the *ak* or *madár* (*calotropis procera*). The villagers were organized and endeavoured to drive back the enemy, immense numbers of whom were destroyed by

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driving them into trenches where they were buried or into bushes where they were burned, but their numbers were so great that little impression was made. It was noticed that the young locusts (*púng*) had a cannibal propensity for voraciously attacking and devouring piecemeal their dead and wounded comrades, whom indeed they seemed to prefer to any other kind of food. By the middle of June most of the survivors had developed wings, and successive flights of them took their way towards the east feeding as they went on the bushes of the Bár jungle, where also a considerable number of young locusts had been hatched. In October and November again considerable numbers were hatched in the Salt Range and along its base, but most of them were destroyed before they could do much damage. Considering the immense numbers of locusts that had infested the district, it was astonishing how little damage had been done. The grass and trees had suffered considerably and some of the latter died from the effects of the loss of their foliage and bark, and a considerable area of young cotton and *bájra* was destroyed, but the wheat crop had suffered so little that it was only found necessary to remit Rs. 317 in ten villages in the Salt Range.

Again in May 1893, flights of locusts came up from the south and west and deposited eggs in the Thal and along both banks of the Jhelum, but the young locusts were mostly destroyed before much damage was done. Since 1893, there have been no noteworthy visitations and there has been no remission of revenue on this account. Another species of locust (*makkar*) *pœcilocera picta*, of a bright yellow colour with bars of brilliant blue and green and of sluggish habit, is constantly present. It is found only on the *akk* plant (*calotropis procera*) which the migratory locust will seldom touch.

A sort of cricket (*toka*), identified as allied to the genus *gryllodes*, and an acridid of the genus *chrotogonus* known here as *tridda*, often do great damage to the sprouting *kharíf* crops in April, May, and June, usually making their ravages by night. They were exceptionally numerous in 1891 when a cold wet winter was followed by a hot summer, and again in 18.3 and 1915 when the seasons were similar. In 1911 the cotton-crop was so badly ravaged by boll-worm throughout the canal-irrigated area, that the crop could only be assessed at half rates. White ants (*sivvi*) attack timber and garnered grain, which is also much subject to injury from weevils (*ghun*). Mosquitoes and sand-flies make life a burden in the hot weather, and house flies swarm, especially towards the beginning and end of winter. On the other hand, the honey-bee makes delicious honey from the flowers of the

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Salt Range, and in irrigated tracts the firefly flashes his electric light among the trees. Scorpions and centipedes are comparatively rare.

Temperature, wind and climate (Table 2).

Some parts of Shahpur District, and especially the uplands of the Bár and Thal, and the waterless, treeless tract along the foot of the Salt Range, are in the months of May and June among the hottest regions in India. In those months little rain falls and the temperature at Khusháb rises day after day to 115° or more in the shade, the average daily maximum for June being nearly 108°. In the river valleys and especially where canal irrigation has moistened the soil and covered it with shady trees the temperature does not rise quite so high: yet the thermometer often stands at over 110° in the shade, and between 90° and 95° in the house, with the doors closed during the day. At night in this season the temperature goes down to about 85°. When the monsoon rains commence the temperature falls considerably, and in July and August seldom goes above 105° in the shade, and often falls as low as 80° during the night. In September and October the temperature gradually falls until about the middle of the latter months, the days are no longer hot in the shade and the nights are distinctly cool. The cold season then sets in and for nearly six months the district enjoys almost perfect weather with bright days and cold nights. At intervals in January, February and March the sky clouds over and the weather is cold, raw and damp, reminding one of a northern clime. The coldest month is January, when the thermometer often stands at 60° in the day and goes down to freezing-point in the early morning—the average nightly minimum at Khusháb being 41°. On such nights shallow pools freeze over, and hoar-frost appears on the blades of grass and young wheat, but is soon dissipated by the rising sun. Towards the middle of April the temperature again begins to rise uncomfortably high and continues to rise till the coming of the monsoon rains in the end of June except when, at rare intervals, a refreshing shower reduces it somewhat for a day or two. The temperature of the valleys of the Salt Range is generally about 10 degrees lower than that in the plains; and at Sakesar, nearly 5,000 feet above the sea, the temperature in the hot months rarely goes above 90° in the shade or below 70°, and in the house with the doors open generally stands between 85° and 75° with surprisingly small variation. In October it goes down to about 70° and in the winter often stands below freezing-point.

The Jhelum valley is less exposed to winds than most parts of the Punjab, and often the air is absolutely calm. In the dry

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Temperature, wind and climate (Table 2).

hot weather, however, dust-storms frequently make their appearance, generally from the direction of the sandy Thal, converting daylight into almost complete darkness and sometimes blowing with such violence as to uproot large trees. In the tract along the foot of the Salt Range such dust-storms are at that season of almost daily occurrence; and at the mouths of the gorges a fierce wind blows down from the hills nearly every evening, often drying up and withering the ripening wheat. On the top of Sakesar the air is hardly ever at rest and strong squalls or whirlwinds are frequent.

Rainfall (Tables 3, 4 and 5.)

The average annual rainfall varies considerably for different parts of the district and decreases rapidly as one goes south-west away from the Himalayas. It is also somewhat heavier near the rivers and in the Salt Range than in the dry hot uplands. At Midh in the Chenab Valley it averages 15 inches. On the Jhelum it averages 16 inches at Miáni and Bhera, 14 inches at Shahpur, and 12 inches at Sáhíwál. At Khusháb on the west bank of the river the rainfall is about an inch less than at Shahpur, which is much better off in the matter of moisture and vegetation. At Mitha Tiwána on the edge of the Thal the rainfall again averages 10 inches, while at Núrpur in the middle of the desert, the average is about the same. In the Salt Range at Naushahra the average is 18 inches, while at Sakesar it is 23 inches.

Taking 15 inches as the average rainfall for the Jhelum Valley, it may be said that 11 inches fall in the summer and 4 in the winter months. April and May have rather more than half an inch each, an inch falls in June, 4 inches in July, 3½ in August and 1½ in September. October and November have little more than half an inch between them, December is almost entirely rainless, and January, February, and March have slightly over 1 inch each. The rainy season commences towards the end of June or beginning of July and lasts for little more than two months. On the rainfall of July and August depends the sowing of the autmn crop. Rain in September is very favourable both for maturing the autumn crop and for moistening the ground for the wheat sowings. The spring crop once in the ground is chiefly dependent on the showers of January and February. It is worthy of remark that while the total annual rainfall is almost the same as for the Hissar District near the Rájpútána Desert, Shahpur gets 4 inches of rain in the winter months, while Hissar gets little more than 2, and this, combined with the lower temperature of Shahpur, renders its climate much more favourable for growing wheat than that of Hissar.

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Rainfall (Tables 3, 4 and 5.)

But while these are the averages it must not be forgotten that the chief characteristic of the rainfall here is not its scantiness, but its variableness both from year to year and from place to place. For example, at Bhera in 1891-92 the total annual fall was only 5 inches, and in the following year it was 24 inches. In the six winter months of the former year only half an inch fell and in the corresponding period of the latter year 6 inches. Again, in July 1908 only an inch fell at Shahpur while 5½ inches fell at Khusháb, only 8 miles off. In fact much of the rainfall comes from partial thunderstorms, often of great violence and excellent rain may have fallen in one village, while another a few miles off may have got none. Generally speaking, it may be said that the scantier the total annual rainfall the more variable it is. It is less variable at Bhera and Miáni than at Shahpur and Sáhíwál. It is exceedingly variable in the Thal and along the foot of the Salt Range, but comparatively certain in the valleys within the range.

The value of opportune rainfall to the crops cannot be exaggerated. An inch of rain over the district may be literally worth lakhs of rupees to the peasantry. An hour's thunderstorm may put thousands into the pockets of one village. An exceptional shower in April or May is very favourable for the sowing of cotton or early *bajra*. Good rain in the usually almost rainless months of November or December enables the peasants to sow thousands of acres of rain-land which would ordinarily remain barren. On the other hand, the failure or delay of the usual monsoon rains leads to a great contraction of the area under the autumn crops and to a scarcity of grass and fodder of all kinds. Should the monsoon rains cease early, the autumn crop dries up, and the ground is not sufficiently moistened for the wheat sowings. Again when, as happened in 1890, 1892 and 1915 the winter rains hold off, much of the wheat fails to come to maturity and the spring crop is a very poor one. Unusually heavy rain in April and May, such as fell in 1893 and 1907, does great damage to the ungarnered grain on the threshing floors, while if the rain comes while the crop is still standing, as happened in 1915, the outturn of grain is much diminished. The prosperity of the district, and especially of those parts of it which are chiefly dependent on the local rainfall, varies very greatly from year to year according to the amount and opportuneness of the rainfall.

Snow and hail

Snow sometimes falls on Sakesar, but very seldom on the lower parts of the Salt Range, as it did in the exceptionally cold and wet winter of 1892-93. Hail-storms are frequent all over

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Snow and hail.

the district, but very partial in their effects. They are most to be dreaded just before the wheat harvest. The most severe in recent years fell in April 1893, crossing the district in almost a straight line from the Salt Range to the Chenáb and leaving behind it a path of devastation 50 miles long and 3 or 4 miles broad. The wheat and poppy crops were then ripening and that afternoon's storm caused a loss to the peasants, over whose fields it passed of, at least a lakh of rupees. In April 1915, the wheat crop in the south of Shahpur and Sargodha Tahsíls was practically ruined in the same way.

Floods.

By far the greatest flood within living memory occurred on 20th July 1893 on the Jhelum river: the water spread in some places as far as 10 miles beyond the ordinary river channel; 15 human beings and upwards of 1,000 cattle were drowned; the unstored grain and fodder were entirely washed away, and the growing *kharíf* crops destroyed over a very large area; 31,000 houses were reported to have been ruined, and large stores of grain garnered from the preceding bumper crop were irretrievably damaged. The monetary loss was estimated at eight lakhs of rupees, in addition to which there was a very heavy mortality in the ensuing fever season, and the soil in several localities along the lines of low level was permanently soured. In the spring of 1907 there were unseasonable floods, which did considerable damage to the ungarnered crops, and in April 1915 some of the lowlying lands suffered in the same way, but no flood has eclipsed the memory of 1893, which is everywhere spoken of as the "year of the big flood" (*waddi káng*).

Earthquakes.

There have been no serious earthquakes in recent times, but the shock, generally known as the Kangra Valley earthquake of 1905, was felt throughout the district, and in the spring of 1915 there was a sharp shock, which damaged the domes of the Shah Shams shrine at Shahpur, and caused the collapse of a few houses in Shahpur town.

Section B—History.

History.

Archæological remains.

But little is known of the early history of this part of the country, and there are very few archæological remains to enable us to arrive at any certain conclusion regarding its former inhabitants. Some of them have been described by General Cunningham in his Archæological Survey Reports, Volume V, pages 79 to 85, and Volume XIV, pages 33 to 41, and in his ancient Geography, pages 155 to 1[illegible]9. The most ancient remains are probably those to be found in the Salt Range, among them the most

Ruins at Amb.

interesting being the ruins at Amb, 5 miles south of Sakesar,

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Ruins at Amb.

which have been described by General Cunningham in his Report, Volume XIV, page 33. Here, on a hill well inside the range and defended by steep cliffs from attack from the direction of the plain country lying to the south, are the remains of a massive fort in very fair preservation, with the ruins of three temples, one large and two small ones, and the walls of a large number of houses, which show that the place must have been one of considerable size and importance. General Cunningham mentions that the temples are all of the Kashmirian style, and are almost certainly of late date as all the arches have cinquefoil instead of trefoil heads, which is the only form in Kashmír. He thought therefore that their most probable date was from 800 to 950 A. D. during the rule of the Brahman dynasty of Kábul. There is a tradition among the present inhabitants that an inscribed stone was found among the ruins at Amb in the early years of our rule, and was sent on a camel to Leiah, which was then the head-quarters of the district, but unfortunately no trace of that stone can now be found. In 1888 three pieces of sculpture were found near the entrance to one of the temples. These have been deposited in the Lahore Museum. The ruins at Amb are supposed to be the most southern example of the ancient and very peculiar Kashmíri architecture. They were declared to be protected monuments by Punjab Government's notification No. 153, dated 25th July 1911.

Other ruins in the Salt Range.

On the hills a little to the east of Amb may be seen the remains of a long wall with a gateway, which may have been erected for defensive purposes, probably against the inhabitants of the plains, and on the very top of Sakesar itself are the ruins of what probably was a small Buddhist shrine. Throughout this part of the Salt Range one frequently comes across oblong platforms built of squared stones, many of them having inserted in one side in the form of a cross four stones of a different colour from the rest of the structure. The present inhabitants cannot say what they are but they are evidently tombs of a Hindu or Buddhistic period. They would probably repay the trouble of a systematic search. A number of them may be seen on the road from Kathwai to Sakesar.*

Inscribed stone of Khura.

At Khura in the Salt Range, about two miles north-east of Kathwai, there was found in 1888 among some ruins an inscribed stone which was sent to the Lahore Museum. The inscription was deciphered by Professor Bühler, who gives a *facsimile* and

* Sir Aurel Stein has visited the Shahpur Salt Range and investigated the remains there, but unfortunately no notes on his researches have been published, and the Archæological Department are unable to add anything to the account of Mr. Wilson.

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Inscribed stone of Khura.

translation of it in the Epigraphia Indica, Part V, for October 1889. He states that the characters resemble those found in the older Buddhist nail-headed inscriptions of the Gupta period, and that the language is a mixed dialect, incorrect Sanskrit, strongly modified through the influence of the Vernacular Prakrit. The inscription bears the statement that it was incised in the reign of Toramana Shaha Jauvla, who seems to have been an independent king, possibly of Turkish origin. It records the construction of a Buddhist monastery by one Rota-siddhavriddhi for the teachers of the Mahi-sasaka School. It mentions a town called Naschira, which may possibly be the place now called Naushahra, an important village in the Sún valley, about 7 miles from where the stone was found. Professor Bühler, on palæographical grounds, assigns the inscription to the fourth or the fifth century.

Coins found near Amb.

In 1886 in the hills a mile or two from the ruins of Amb a shepherd, while watching his flock, employed his leisure time in knocking down a bank of earth with his stick, and noticed among the *débris* an earthen vessel, inside which he found 549 small coins. These were sent to Calcutta and were there deciphered by Dr. Hœrnle as belonging to different kings who reigned between the years 1060 and 1215 A. D., the most numerous being those of Maizz-ud-dín, Muhammad bin Sam, conqueror of India, 1193-1205 A. D. and of Sri Chahad Deva, Rája of Ajmír, about 1215 A. D.

Other coins found in the Salt Range.

Again in 1888 at the village of Chitta at the foot of the Sakesar hill a man while ploughing turned up an earthen vessel containing 498 coins, all but one being of the "Horseman and Bull type" and belonging to Saif-ud-dín Hasan Qurlagh who was one of the leading generals of Jalál-ud-dín Maukbarnín, the last of the Kharizmian Kings in the beginning of the thirteenth century A. D. Another hoard of 395 coins of the same ruler was discovered in the following year on a hill-side near the same village of Chitta. About the same time 304 coins were found near the village of Sodhi, also in the Salt Range, all of which with one exception were coins of the Pathán Sultán of Delhi, Ghiyás-ud-din Balban, who reigned from 1265 to 1287 A. D.

Old sites in the Bár.

In the Bár tract between the valleys of the Chenáb and Jhelum rivers there are some 270 mounds of earth mixed with loose bricks and fragments of pottery which mark the sites of former towns and villages. It is unlikely that those sites were all inhabited at any one time. More probably they were built upon when the rivers flowed in one or other of the old channels still existing in the Bár, and as a river moved further to the east or west the population gradually followed it and deserted the old

sites for new ones nearer the new course of the river. This theory is supported by the fact that old wells found near these old sites have often only 25 feet or so of brickwork, while the present underground water-level is over 60 feet, showing that when the wells were made, water was much nearer the surface probably because the river was at the time near the site. It is improbable that the population of the whole district was even larger than it is at the present day. CHAP. I-B. History. Old sites in the Bár.

Old towns—Vijjhi.

Among the most extensive of these deserted sites are those near Vijjhi 3 miles west of Miáni, Takht Hazára on the Chenáb, Chak Sáhnu 13 miles east of Shahpur and Panj Pír 10 miles south of Sáhíwál. Vijjhi is described in the Achæological Survey Reports, Volume XIV, page 40, by General Cunningham, who mentions six tombs of *nogaja's* or "giant martyrs," and says he obtained here two coins of Indo-Scythian Princes.* Takht Hazára was once, according to tradition, a large city called Jahángírnagar Takht Hazára, because it covered a thousand acres. The numerous mounds that mark the site show that it must have been of considerable size. In the *jamabandi* of the Sarkár Doába Chaj given in the Aín Akbari, the Mahál of Hazára is stated to have paid a revenue of 46,89,136 *dáms* or Rs. 1,17,228. Ránjha, or more properly Dhido of the Ránjha tribe, the hero of the well-known romance "Ránjha and Hír," belonged to Házara. There are a large number of old wells, most of them small and insignificant, a mosque and the tombs of several *faqírs*, the chief of which is the tomb of a Mughal *faqír* called Shahám-ud-dín, but none of them of any great architectural interest. The town is said to have been deserted about 200 years ago, and after remaining uninhabited for about a century was again occupied by the ancestors of the present inhabitants about 1785 A. D. Chak Sáhnu is probably the site of the Chak Sáni which is mentioned in history as having been sacked and burned by Núr-ud-dín, the General of Ahmad Shah Abdáli. Panj Pír must also have been at one time a large town; according to a Hindu story it was one of the resting places of the five Pándavas, but the Mussalmán residents ascribe its sacredness to five saints, some of whose graves, nine yards long, are pointed out in the vicinity. None of these mounds have yielded any old sculptures or inscriptions, and evidently the population that inhabited them in their days of prosperity had not reached any very high stage of civilization. Few coins have been found in them earlier than the days of the Mughal Empire.

Takht Hazára.

Chak Sáhnu.

Panj Pír.

* This site, locally known as Chak Sabz, was declared a Protected Monument by Punjab Government's notification No. 849, dated 9th December 1909.

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Architectural remains in the plains.

The only architectural remains in the plains part of the district are of comparatively recent date. Many of them, such as the mosque at Bhera, the *wáns* or stair-cased wells at Gunjiál and Hadáli, and the remains of a massive masonry dam across the mouth of the Katha gorge, evidently built for the purpose of distributing the water of the stream, are all ascribed to Sher Sháh, King of Delhi, about 1540 A. D. There are a few tombs of Muhammadan days near Khusháb and at other places in the district, but none of any architectural value. At Sháh Yúsaf, 7 miles south of Shahpur, there is a small but elegant tomb, ornamented outside by coloured tiles, which was erected in 900 A. H. to the memory of a holy man of that name, whose descendants still reside at the spot and subsist on the offerings of worshippers.

Buildings worth preservation.

The only buildings which are worth active efforts to preserve them are (1) the temples at Amb, (2) the *nogaja* tombs at Vijjhi and Panj Pír, (3) the *wán* or *báoli* at Gunjiál, (4) the mosque at Bhera, (5) the tomb at Sháh Yusaf and (6) the most elegant of the tombs at Khusháb.

Political history divisible into three periods.

The political history of the district may conveniently be divided into *three periods*. The first, that which preceded the downfall of the Mughal Empire; the second, the brief space occupied by the successive inroads of the Afgháns, followed by the rapid acquisition of power by the Sikhs; and the last, the period during which, by a happy admixture of boldness and artifice, the young leader of Sukar Chakia *misl* succeeded in making himself master of the whole of the Punjab, from the banks of the Sutlej to the mountains of Sulemán.

First or Mughal period.

The first may be dismissed with a few words. A tract of country not naturally rich, and far removed from the high road between Hindustán and the countries beyond its northern frontier, would not be the scene of events of sufficient magnitude to leave a lasting impress on the minds of the people, and hence tradition has preserved little that refers to so remote a period. All that is known is, that during the latter years of Muhammad Sháh's reign the affairs of Bhera, and the surrounding country as far south as Shahpur, were administered by Rája Salámat Rái, a Khatri of Anand clan; that Khusháb and its dependencies were under the management of Nawáb Ahmadyár Khán; that the tracts lying to the south of the district, and along the Chenáb formed part of the territory delegated to the charge of Mahárája Kaura Mal, then Governor of Multán; and that the Thal formed part of the *jágír* of the descendants of the Biloch founders of the

Second or Afghán Period. Rise of the Sikhs.

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Second or Afghán Period. Rise of the Sikhs.

two Deras. To this period succeeded one of anarchy. The weakness of the Mughal Government had invited attack from without, and fostered insurrection within; wave after wave of invasion for nearly thirty years poured down over the defenceless country, and in the intervals the Sikhs made good every opportunity afforded them by the weakness of the government, to enrich themselves at the expense of their more peaceable neighbours. The remote position of this tract of country did not altogether save it from the calamities incident on such a state of things. In the year 1757 a force under Núr-ud-dín, Bamizai, deputed by Ahmad Shah to assist his son Timúr in repelling the Mahrattas, crossing the river Jhelum at Khusháb, marched up the left bank of the river. The proceedings of this man may be taken as a type of the excesses committed by the invading armies; and some idea will be formed of the amount of misery caused by these inroads. Núr-ud-dín, finding that the inhabitants would not pay the large ransoms demanded of them, successively plundered and laid waste with fire and sword three of the largest towns of the district. Two of these, Bhera and Miáni, rose again on their ruins, without however completely recovering the shock they had sustained; but of the third, Chak Sáhnu, nothing remains but a mound of earth and potsherds.

About this time Nawáb Ahmadyár Khan died, and Khusháb was added to the territory under the charge of Rája Salámat Rái. But the latter had not held it many years before he was treacherously put to death by Abbás Khán, Khattak, who held possession of the Salt Range and Pind Dádan Khan on the part of Ahmad Shah. Abbás Khán then seized Bhera; but his attempt to make himself master of the surrounding country was foiled by the determination shown by the widow of the murdered Governor, who shut herself up in the fort of Cháwa, while her nephew, following her example, held out in his stronghold of Fatehgarh, close to Bhera itself. These events occurred in 1760; and before Abbás Khán had time to subdue his opponents, he was himself thrown into prison as a revenue defaulter, when the former status was restored, Fateh Singh obtaining possession of the tract previously held by his uncle, and Muhammad Nawáz Khán succeeding his father in the government of the country north of the Jhelum.

The Sikh Conquest.

After the final successes of the Sikh commonwealth against Ahmad Shah in 1767, the whole of the Salt Range was overrun and appropriated by Chattar Singh of the Sukar Chakia *misl*, while the Bhangís taking possession of the tract of country

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between those hills and the Chenáb, as far nearly as Sáhíwál, parcelled it out among themselves after their usual fashion. The division of the portion comprised within this district was as follows: the *zails* of Midh and Músa Chúha, as dependencies of Kádirabad, were retained as their own share by Ganda Singh and Jhanda Singh, the leaders of the *misl*. Miáni was assigned to Tára Singh, and Bhera with Ahmedabad fell to the lot of Mán Singh, from whom they passed in 1769 to Dhanna Singh and Charat Singh of the same confederacy.

Independent chieftains.

The Muhammadan chieftains of Sáhíwál, Mitha Tiwána and Khusháb had some time previously assumed independence, and, though hard pressed, were able generally to resist the encroachments of their new neighbours, the Sikhs. South of the Jhelum, however, the Bhangís had succeeded in wresting from Muhammad Khán of Sáhíwál the greater part of his possessions; but after the chief's death, his son Fateh Khán drove out the Sikhs, and by degrees established his authority over nearly the whole of the tract afterwards included in the Shahpur Tahsil. But these changes brought no repose; might was the only test of right; and, in the absence of any general controlling authority, the country became a prey to the ambition of rival chiefs struggling for supremacy. It would be tedious and profitless to record all this petty warfare. Only those occurrences need be mentioned from which permanent changes of possession resulted.

Across the river Jhelum the Tiwánas under Malik Sher Khán made themselves masters of Núrpur and the surrounding country, and after the death of Gul Jahánnia of Warchha succeeded in establishing a partial authority over the Awáns along the base of the Salt Range. They also wrested Shekhowál and several other villages on the right bank of the Jhelum from the Biloch Chief of Sáhíwál. But the Malik's attempt to reduce Khusháb was unsuccessful, for although Lal Khán was killed in the defence of the town, the Tiwánas were driven off, and Jáfir Khán, the deceased chieftain's son and successor, thenceforth remained in possession, until Ranjít Singh absorbed the *taluka* into the rest of his dominions.

South of the Jhelum, as described above, the Bhangís had possessed themselves of the whole Doáb east of Shahpur; while to the west of that place as far as Nibang the country owned the authority of the Chief of Sáhíwál. But in Shahpur itself, a colony of Sayads, under Ghulám Shah, established a semi-independent authority,* and this they were allowed to retain

*The descendants of Ghulám Sháh and his father Nathu Sháh still hold the greater part of the land in Shahpur and its neighbourhood.

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unmolested by their more powerful neighbours, owing doubtless to the reverence in which they were held as the descendants of a renowned saint. The remainder of the Doáb to the junction of the two rivers, was held by the Siál Chiefs of Jhang, Izzat Bakhsh Rehán, a powerful *zamíndár* of those parts, being their Deputy in Kálowál. Such was the status of possession when the Sukar Chakia confederacy under Maha Singh began to acquire the ascendancy and the power of the Bhangís to decline. The subsequent history of the district consists of a series of encroachments on the part of Maha Singh and his renowned son Ranjít Singh, until the whole country was incorporated with the dominions of the latter.

Rise of Ranjít Singh.

By the deaths of Sardárs Jhanda Singh and Ganda Singh, the Bhangi confederacy was left without a head; and Maha Singh, having joined his forces to those of the Kanhya *misl*, found no difficulty in making himself master of Kádirabad. By this event, which occurred in 1781, the *talukas* of Midh and Musa fell into his hands, and two years after, he succeeded in taking Miáni and its dependencies from Tára Singh, Bhangi. For some time now there was a pause in the tide of conquest Ten years after the event last recorded, Maha Singh died, leaving his son Ranjít Singh, a boy of thirteen years; and it was long before the latter had sufficiently established his authority round Lahore, to allow him to think of making conquests so far from the capital. But the process of annexation though slow was sure, and the wily young chief was never in want of a pretext for adding to his possession. Bhera was coveted, and the reason assigned for interference in its affairs was the tyranny of Jodh Singh, who had succeeded to the family conquests on the death of his father Dhanna Singh; with this plausible excuse, Ranjít Singh marched from Miani in 1803, and having obtained possession of the fort by means of a stratagem, the person of Jodh Singh was secured, and the young Máhárája entered unopposed into possession of the country lying on both sides of the river as far as Jháwari.

Conquest of Sáhíwál and Khusháb.

The next move was against the Biloch Chiefs of Sáhíwál and Khusháb. In 1804 Ranjít Singh had placed the former under contribution, and the tribute, which at first was almost nominal, was afterwards raised to twelve thousand rupees a year The increased demand was not met with promptitude, and this furnished the Máhárája with the pretext he was in search of. Accordingly, in 1809, a force was organized, and Ranjít Singh marched for Sáhíwál. Having taken up a position at Mangowál, one march from that place, he

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sent Sardár Attar Singh to bring the Biloch Chief to his presence. But Fateh Khán, taught by experience, suspected treachery, and excused himself from obeying the call. On receiving, however, the Sardár's solemn assurance that no harm should befall the boy he sent his son Langar Khán with a handsome offering to the camp of the Maháraja. To divert suspicion, Ranjít Singh received the boy very graciously, and having dismissed him with rich presents and assurance of his continued friendship for his father, he retraced his steps and marched against Jáfir Khán Fateh Khán, falling into the trap laid for him, dismissed his forces to their homes, and before he had time to make fresh preparations for resistance, Ranjít Singh, flushed with his success before Khusháb of which place he had made himself master after a siege of only eight days, suddenly appeared before Sáhíwál and took the place by a *coup-de-main*. The chief was himself carried off a prisoner to Lahore, and the new conquered territory given in *jágír* to the heir-apparent, Kharrak Singh. Thus fell Khusháb and Sáhíwál; and at the same time the smaller possessions of the Shahpur Sayads and of Budh Singh, Bhangi, around Bakkar, were added to the rapidly increasing territory under the sway of the Maháraja. In the year following, the *talukas* of Faruka and Kalowál fell into his hands, together with the remainder of the country which had been subject to the authority of the Siál Chiefs of Jhang.

Conquest of the Tiwána country.

There remained now only the possessions of the Maliks of Mitha Tiwána, and these, too, soon shared the common fate. A well-equipped force was despatched against them under Misr Díwán Chand in 1816. The Tiwána Malik retired to Núrpur, in the heart of the Thal, thinking that the scarcity of water and supplies might prevent the Sikh army from effecting its object. But all obstacles disappeared before the energy of the Sikh commander, who sank wells as he advanced, so that after a time the Tiwánas, finding resistance hopeless, abandoned the place and took refuge with their old enemy, the Nawáb of Dera Ismail Khan, who had not the generosity however to forget their former rivalry in pity for the fallen fortunes of the Tiwána Chiefs, but plundered them and turned them out. After this, for nearly two years, Malik Khán Muhammad and his sons wandered from place to place, subsisting on the charity of their neighbours; but finding this kind of life insupportable, they determined on making an attempt to recover their former possessions. An appeal made to their fellow-clansmen was heartily responded to, and, at the head of this irregular force, they

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appeared suddenly before the walls of their native town. The Sikh garrison, completely taken by surprise, abandoned the place and fled, and the Maliks were once more masters of the land of their ancestors. Their triumph was, however, but short-lived. In the early part of 1818, the ousted Governor returned with a strong force, and the Maliks were a second time compelled to fly. The possessions of the Tiwána Chiefs were then given in *jágír* to the famous Hari Singh, Nalwa, and were held by him till his death at Pesháwar on the 30th April 1837.

After history of the Tiwána family.

The attempt made by Khán Muhammad served to convince Ranjít Singh that it would be bad policy to drive the Tiwánas to desperation; when therefore the Malik repaired to Lahore to tender his submission he was well received, and a liberal provision made for the support of the family. Villages on the left bank of the Jhelum, yielding ten thousand rupees a year, were assigned in *jágír* and several of the chief's relations and dependents were taken into the service of the State. Matters remained in this state, the elders living quietly on their *jágír*, while the younger members of the family with their contingents served with the army whenever called on to do so, till the death of Hari Singh before Jamrúd. In the interim the old Malik Khán Muhammad, and his elder son Ahmadyár Khán had died, and Malik Khudáyár Khán, the younger son, with his nephew Kádir Bakhsh, were thus left as the representatives of the family. The former had had the good fortune, some time before, to place Rája Guláb Singh under a deep obligation, which resulted in a close friendship between them, and was the means of introducing the Malik at Court, where, befriended by the Rája and the latter's brother, the prime minister, Khudáyár Khán and his son, the well-known Fateh Khán, soon rose to positions of great favour.

Fateh Khán was thus favourably situated when the news of the death of Hari Singh reached Lahore. He lost no time in obtaining from his patron, in his own name, the farm of the ancestral *talúkas* of Mitha Tiwána; and his father dying about the same time, he was left the acknowledged head of the tribe. From this time till the unprovoked aggressions of the Sikh army led to the first Sikh War, Fateh Khán took a prominent part in the politics of the country, and his love of intrigue found ample scope in the confusion into which the affairs of the State were thrown after the deaths, in rapid succession, of Ranjít Singh, his son and grandson. For some time Fateh Khán remained faithful to the side of his patron Rája Dhián Singh, and reaped

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the reward of his attachment in ever-increasing grants of territory in farm. But ere long the prime minister was assassinated, and suspicion of complicity in the deed having fallen on the Malik, he retired to Bannu to escape the vengeance of Rája Híra Singh, the son of the murdered man. Soon after, emerging from his retreat, the restless Malik created a diversion in favour of Sardár Jawáhar Singh, to whose party he had now attached himself, by raising an insurrection in his native country and making himself master of Mitha Tiwána; but the expedition failed, and Fateh Khán, being ejected from the town by a Sikh force under Sardár Mangal Singh, was forced to take refuge in Bahâwalpur, where he remained, till the death of Híra Singh, in 1844, allowed him to come forth from his asylum.

The rest of the Malik's story is soon told. During Jawáhar Singh's brief tenure of power, Fateh Khán enjoyed unbounded authority, the services of so unscrupulous a partisan being, in the existing state of affairs, beyond price. But bad times were coming for the Malik. His patron was put to death by the army, and his enemies, headed by Rájás Teja Singh and Dína Náth, succeeded to power, and were not slow in gratifying their malice. He was called on to give an account of the revenues of the large tracts of county of which he had held the management, and was brought in a defaulter to the extent of several lakhs of rupees. Unable to meet this heavy demand, he was thrown into prison, where he remained till Lieutenant (afterwards Sir Herbert) Edwardes, thinking he would be of use on the frontier, obtained his liberation and ultimately, when the Multán rebellion broke out, sent him to relieve Lieutenant Taylor in the charge of Bannu. The Sikh troops soon after broke out into open mutiny, and besieged Fateh Khán with his Muhammadan levies in the fort. The Malik held out bravely, till the supply of water failed, when, seeing that the defence could be no longer protracted, he came out and was shot down while boldly challenging the best man of the Sikhs to meet him in single combat.

When this occurred, Malik Fateh Sher Khán, the son of Fateh Khán, and Malik Sher Muhammad Khán, the son of the deceased Malik's first cousin Kádir Bakhsh, were serving under Major Edwardes' orders before Multán. Both did good service; the former remaining with Major Edwardes, while the latter was detached to follow on the tracks of the Bannu force then in full march to join Sher Singh, and to endeavour to restore order in his native district. In the execution of this commission, Sher Muhammad Khán drove out the Sikh garrisons, and made himself master in rapid succession of the principal towns and strong-

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holds in this part of the country beginning with Mitha Tiwána and ending with Sáhíwál ; and added to his other services, by collecting a portion of the revenue and remitting it to Major Taylor, who was then employed in restoring order along the frontier. Nor must the services of Malik Sáhib Khán, the uncle of Sher Muhammad Khán and a gallant member of this family, be forgotten He too served with Major Edwardes' Irregulars, and was afterwards employed with Sardár Langar Khán of Sáhíwál and others, in putting to flight the force headed by the rebel Bhái Maháráj Singh, and in reducing Chiniot. In short, this family has always shown itself actively loyal in seasons of disturbance, and it is only in times of peace, when the naturally jealous dispositions of its members have full play, that their internal feuds render them a source of annoyance to all around them.

After the fall of Multán and the overthrow of the Sikhs at Gujrát the Tiwána Maliks had time to look about them. They knew that they were to be rewarded, but the question was, who was to receive the lion's share as the head of the tribe ? Sher Muhammad Khán claimed the turban, as the descendant of the elder branch, while Fateh Sher Khán rested his title on the acknowledged pre-eminence of his father, Fateh Khán. The dispute was eventually settled through the mediation of friends. It was decided that in point of rank they should be on an equality one with the other, and that in all the material benefits that might accrue to them as representatives of the tribe, both should share alike, and this agreement has since been acted on.

The Tiwána Maliks were well rewarded. Soon after annexation they preferred a claim to a fourth of the revenues of the Núrpur and Mitha Tiwána *talúkas* and in consideration of their loyalty and good services the claim was admitted, and villages yielding Rs 6,000 a year were granted in *jágír* to each, to be held by them and their heirs in perpetuity. In addition to these grants, life pensions of Rs. 5,000 and Rs. 3,240 were conferred respectively on Maliks Fateh Sher Khán and Sher Muhammad Khán, a pension of Rs. 480 a year was, at the same time, granted to Malik Sáhib Khán. Lastly for their services during the mutinies, the Maliks obtained the following rewards : Maliks Fateh Sher Khán and Sáhib Khán life *jágírs* of twelve hundred rupees each, and Malik Sher Muhammad Khán one of six hundred rupees. To these substantial gifts was annexed the much coveted and highly prized title of Khán Bahádur.

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History of the Sáhíwál chiefs.

It is now time to return to Sardár Fateh Khán of Sáhíwál, who was left a prisoner at Lahore In accordance with his usual custom, Ranjít Singh after a while released his prisoner, giving him a *jágír* first in Jhang and then in Ahmadabad, near Pind Dádan Khan, stipulating, however, that Fateh Khán was to remain at court. But, after a life of independence, the Biloch Chief was ill-fitted to play the courtier, his proud spirit chafed at the confinement and, like the Tiwána Malik, he was tempted to strike a blow for independence. He applied to the Nawáb of Mankera for assistance. The request was favourably entertained, and the two Chiefs, with their combined forces, actually started to attempt the recovery of Sáhíwál. But fear of the consequences to himself of failure overcame the Nawáb's desire to assist his fellow-clansman, and abandoning Fateh Khán to his fate, he precipitately retreated to his stronghold of Mankera. Fateh Khán, seeing that he had committed himself beyond power of recall, and that now he had nothing to hope for from Ranjít Singh, fled to Multán, and soon after took refuge in Bahávalpur, where he died in 1819.

Langar Khán, the son of the deceased Chief, a lad of fourteen years of age, was left a pensioner on the bounty of the Nawáb, and remained at Bahávalpur till 1822, when Ranjít Singh hearing, while on a visit at Multán, that Fateh Khán was dead, sent for Langar Khán, and gave him a *jágír* of two thousand rupees a year with a personal allowance of three rupees a day. The *jágír* was afterwards (in 1838) increased to three thousand rupees, and the allowance to five rupees a day. Langar Khán with his men formed part of the Sikh contingent which, under Captain (afterwards Sir H.) Lawrence, accompanied General McCaskill's division in Pollock's advance on Kábul. Langar Khán also served with distinction under Major Edwardes' orders during the Multán rebellion. After annexation, as a reward for these services, the family *jágír*, valued at three thousand rupees a year, was released in perpetuity, and a life pension of twelve hundred rupees granted to Langar Khán. This Chief died in 1853, and was followed to his grave in 1862 by the eldest of his three sons Muhammad Haiát Khán.

The Lámba family.

There is yet one set of circumstances to be referred to, and then the early history of the principal families of this part of the country may be said to be complete. It will be remembered that on Ahmad Shah's final retirement, the Sukar Chakias, under the grandfather of Ranjít Singh, possessed themselves of the greater part of the Salt Range. The status in this respect

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remained undisturbed till 1827, when the members of this confederacy, among whom the conquered tract had been originally parcelled out, having fallen out among themselves, Ranjít Singh resumed their shares and divided them among his favourites; the Sún *talúka* falling to the share of Hari Singh, by whom it was held till his death in 1837. On the occurrence of this event, it was given by the Mahárája to his old friend and playfellow, and afterwards one of the most successful of his Generals, Sardár Gurmukh Singh, Lámba, and it was one of the few gifts of which this brave old man had not been despoiled by the envy and hatred of the Jammu family when we took the country. The majority of the villages constituting the *talúka* were then resumed, but the estate of Naushahra, worth rather more than four thousand rupees a year, was released in perpetuity. Sardár Gurmukh Singh died in 1853, and was succeeded by his son, Attar Singh.

The Mutiny.

The following account of the events of 1857 is taken from the Punjab Mutiny Report. Shahpur was then the head-quarters of the customs line in connection with the Salt Range. Mr. Wright, the Collector of Customs, brought to the assistance of Mr. Ouseley, Deputy Commissioner, a very valuable reinforcement in the shape of 100 of the men of the preventive service, who being all armed and natives of the Punjab or else Patháns, created a valuable counterpoise to the mutinous company of the 46th Native Infantry, which formed the treasury guard. The transit of the 39th Native Infantry through the district on their way from Jhelum to Dera Ismail Khan caused a panic amongst the people of Shahpur. Strange rumours began to circulate about these men, valuables were buried, people became unsettled, and the Commanding Officer of the regiment feared to come through Shahpur while the company of the 46th was there, expressing a hope that Mr. Ouseley had not much treasure under his care. On the evening of the 22nd May a strong guard of police marched into the treasury with three European officers of the station, and took possession of all the surplus money, amounting to Rs. 2,50,000. Part of this was forthwith sent towards Jhelum and part towards Dera Ismail Khan. Under orders which were subsequently received the Jhelum consignment was recalled; but the move which took it in the first instance from the 46th was a most ably planned one, as the Hindustáni troops were at the same time turned out of the treasury fort, which was garrisoned by the police battalion, fortified and provisioned, and a well sunk to supply drinking water.

At one time the villages of the Bár were said to be in an

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unquiet state. Mr. Ouseley posted ten police horse on the confines of the tract of land so called, and as no mutiny of the sepoys took place in the district, the wild tribes remained peaceful even when their brethren in the Multán Division broke out. The mutiny of a portion of the 9th Irregular Cavalry affected this country so far as that it called out the Deputy Commissioner, two or three of the customs officers, and a number of the police. The mutineers were pursued by the police; the soldiery and district officers of five or six districts were on their trail and gave them no rest until Captain Hockin came up with them in the Jhang District and cut them up. A Hindustáni clerk in the customs office was detected in an attempt to unite Hindús and Muhammadans against our Government. He was apprehended, convicted, and punished.

A force of local levies was raised, thus affording vent to the warlike spirit of the martial tribes of the district who chafed at inaction, and probably would have fretted us had not a legitimate object been given them on which to spend their strength. Of these levies upwards of 1,000 horse were raised from among the Tiwánás alone; and Mr. Ouseley describes his relief at their departure as great.

Status at annexation and subsequent changes.

Probably there is no district in the Punjab the territorial limits and constitution of which have undergone so many changes as that of Shahpur. At annexation, the whole of the Chaj Doáb, from the boundary of the Jammu territory to the junction of the rivers Jhelum and Chenáb, was placed under the charge of Mr. E. C. Bayley, and administered by him as one district. But the charge was found too extensive. Accordingly, in June of the same year (1849), this tract of country was divided and formed into the two districts of Gujrát and Shahpur; the latter comprising the four *kárdárships* of Miáni, Bhera, Sáhíwál, and Kádirpur, to which were added the three lowest zails of the *kárdárship* of Kádirabad, *viz.*, Midh, Ahmadnaggar, and Kálowál on the Chenáb. As time wore on, however, and our acquaintance with the newly conquered country became closer, defects were discovered in the first apportionments of territory into circles of administration, and in respect to Shahpur and the surrounding districts speedily led to changes. The first took place in 1851, when the whole tahsíl of Kádirpur was transferred to Jhang, on the ground that the *talúkas* of which it was composed had always been subordinate to that place, that it was more conveniently situated with respect to the head-quarters of that district, and that the inhabitants were chiefly Siáls, closely connected with others of the same tribe in Jhang. For somewhat

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similar reasons, the *taluka* of Khusháb was made over to Shahpur from Leiah, from the commencement of the financial year 1853-54, and the following year saw the transfer back to this district of the Farúka *iláka*.

Constitution of the district in 1853-54 and thereafter.

The district now consisted of the three tahsíls of Bhera, Sáhíwál, and Kalowál, of which all but the narrow strip made up of the trans-Jhelum *parganas* of Khusháb, Girot, and Jaura, attached to the Sáhíwál Tahsíl, were situated between that river and the Chenáb. Presently, however, further additions were made to the district. Early in the year 1857, as the Chief Commissioner was marching acros the Sind-Ságar Doáb, the leading men of Mitha Tiwána came to him in a body praying that the *talúka* might be transferred to Shahpur; urging as their reason for desiring the change the great distance from the head-quarters of their own district (Leiah), and the comparative proximity of Shahpur. The application was favourably entertained, and the transfer took place from the commencement of that financial year. A still more important revision of territorial jurisdictions was made during this year. A difficulty had always been experienced in providing for the effectual administration of that portion of the Sind-Ságar Doáb which lay within a radius of 50 miles from Kálábágh. Circumstances originally led to the selection of Ráwalpindi, Jhelum, and Leiah as sites for stations, and between these places the intervening territory was parcelled out in 1848 as best it might be; but soon it became apparent that they were far too remotely situated to allow of the exercise from them of an effcient control over this tract; and a proposition to create a fourth district having been negatived on the score of expense, the result, as regards this district, was the transfer to it from Jhelum of the following *talukás* and villages :—

In the Salt Range.	The whole of *talúka*	Sún	19 villages
	„ „ of „	Khabakki	6 „
	Part of „	Núrpur Sehti ...	4 „
North of ditto.	„ of „	Jabbi	8 „
	The whole of „	Myál	13 „
	Part of „	Pakkhar	4 „
South af ditto.	The whole of „	Katha	5 „
	Part of „	Ahmadabad	6 „

in all sixty-five villages, paying a revenue of nearly a lakh of rupees.

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A fourth tahsíl created.

These extensive additions to the area of the district trans-Jhelum having rendered the creation of a fourth tahsíl on that side of the river absolutely necessary, the recently transferred tracts were formed into a new fiscal division, which received the name of the Jába Tahsíl from the small village of that name in the Salt Range, where the head-quarters were established. From this time the limits of the district remained unaltered till the year 1861, when the revision of establishments led to the absorption of the Kálowál Tahsíl, and the distribution of its villages between the Bhera and Chiníot Tahsíls; the latter a sub-collectorate of the Jhang District. Important changes were carried out in 1862, when the *talúka* of Núrpur in the Thal was received from Bannu, the Pakkhar *talúka*, extending from Sakesar to Nikki, was cut off and attached to the Miánwáli Tahsíl of that district, and the remainder of the Jaba Tahsíl lying north of the Salt Range was transferred to Jhelum. These interchanges of territory between Shahpur and the surrounding districts necessitated a complete remodelling of the interior fiscal divisions, which was effected by forming the whole of the country still attached to the district trans-Jhelum into one tahsíl, the head-quarters being moved to Khusháb; and by the transfer from the Bhera to the Sáhíwál Tahsíl of an equivalent for the villages which had been added to the former on the breaking up of the Kalowál Tahsíl, as described above; at the same time as Sáhíwál was now no longer central, the head-quarters of that tahsíl were removed to Shahpur.

Further changes.

In 1877-78 the following villages were transferred from Shahpur to Gujránwála District:—

(1) Thatta Mulláhánwála,	(4) Chhani Rahmat Khán,
(2) Burj Fattu,	(5) Chhani Mír Muhammad,
(3) Chhani Sultán,	(6) Burj Ghaus,

and in 1880-81 two villages, Burj Rahmán and Burj Jawáya, were transferred to Gujránwála, to which district they originally belonged, but had been cut off and attached to this in 1877-78.

Changes due to canal irrigation.

On the introduction of irrigation from the Lower Jhelum Canal a new tahsíl was created out of portions of Bhera and Shahpur with head-quarters at Sargodha. Between 1904 and 1907, 21 villages in the Kirána Bár were transferred from Jhang District to the Sargodha Tahsíl, and settled together with the other portions of this district irrigated from the canal. In 1911 the Bhera Tahsíl gave up to Gujrát District 77 villages situated to the east of the Lower Jhelum Canal, Main Line and Escape; these villages are all within the area commanded by the Upper

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Changes due to canal irrigation.

Jhelum Canal; and since it appeared that the best site for a grain-market for this area would be at the Railway junction of Malakwál, that village and Nasírpur were also transferred to Gujrát in 1914. In the same year the district head-quarters were transferred from Shahpur to Sargodha, and the transfer of the Eastern Tahsíl's head-quarters from Bhera to Bhalwál, on the direct line to Karáchi, was sanctioned; so clear had it become that the most important interests in the district now centred round the line of rail that conveyed the produce of the canal area to the nearest sea-port.

Minor changes.

In 1907 the demarcation for the first time of a permanent boundary between this district and Gujránwála, across the Chenáb, brought back one of the previously transferred villages to the Bhera Tahsíl. In 1906 and 1910 the districts of Miánwáli and Attock were given a foothold upon the Sakesar Hill, taking over portions of Rakh Sakesar from Khusháb. In 1912 Shahpur Tahsíl gave up one village (Sher Mohammad Wála) to Bhera and another (Haveli Majoka) to Khusháb. Maps showing the existing internal and external boundaries of the district are now being prepared, and it is hoped that they will not soon be rendered obsolete by further shufflings.

Development since annexation.

Some conception of the development of the district since it came into our hands may be gathered from Table No. 1 of Volume B. which gives some of the leading statistics for five-yearly periods, so far as they are available. It is probable that the figures are not always strictly comparable, their basis not being the same in all cases from one period to another. But the figures may be accepted as showing in general terms the nature and extent of the advance made. So far as statistics go, it may be summed up briefly as follows:—In the last 60 years the population of the district has more than doubled; the area under cultivation has quadrupled and the area under irrigation has multiplied more than six-fold; the number of cattle, sheep and goats has more than doubled, while the number of camels is probably much the same as it was; roads have been made throughout the district, and it is now crossed by two railways; prices of agricultural produce have trebled. The land revenue has been raised from about four lakhs to over twenty lakhs, and the value of the proprietary rights in the land, which at annexation was practically nil, is now about 18 crores of rupees.

District Officers.

The following table shows the Deputy Commissioners who held charge of the district up to 1896 with the period of their

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District Officers.

charges, omitting periods of less than three months :—

Name.	Date of assuming charge.	Date of relinquishing charge.	Total period of charge in years and decimals.
Major W. C. Birch ...	Annexation	25th December 1852 ...	3·8
Major G.E. Hollings ...	6th January 1853 ...	30th May 1856 ...	3·4
Mr. Gore Ouseley ...	31st May 1856 ...	6th March 1860 ...	3·8
Mr. D.C. Macnabb ...	10th March 1860 ...	20th August 1861 ...	1·4
Captain J. B. Smyly ...	21st August 1861 ..	25th December 1861 ...	0·3
Captain H. J. Hawes ...	26th December 1861 ...	25th July 1862 ...	0·7
Captain W. G. Davies ...	26th July 1862 ...	11th December 1867 ...	5 5
Captain J.W.H. Johnstone ...	12th December 1867 ...	16th May 1870 ...	2·4
Captain E. P. Gurdon ...	27th May 1870 ...	10th November 1870 ...	0 5
Captain E. C. Corbyn ...	11th November 1870 ...	8th March 1872 ...	See below.
Captain R. P. Nisbet ...	9th March 1872	1st December 1872 ...	0·7
Colonel H. A. Dwyer ...	2nd December 1872 ...	26th March 1876 ...	3·3
Captain E. C. Corbyn ...	27th March 1876 ...	9th September 1879 ...	See below.
Mr. J. Frizelle	13th December 1879 ...	15th January 1882 ...	2·1
Lieutenant-Col. E. C. Corbyn	16th January 1882 ...	25th February 1884 ...	6·8
Mr. J. W. Gardiner ..	26th February 1884 ...	21st October 1886 ...	2·7
Mr. J. Wilson	22nd October 1886 ...	18th July 1888 ...	See below.
Mr. M. F. O'Dwyer ..	19th July 1888	17th December 1888 ...	0·4
Mr. J. Wilson	18th December 1888 ...	13th April 1890 ...	See below.
Captain F. W. Egerton ...	14th April 1890 ...	28th October 1890 ...	0·5
Mr. J. Wilson	29th October 1890 ...	30th November 1893 ...	6·1
Mr. A. Bridges ...	1st December 1893 ...	9th April 1896 ..	2·8

Of the early officers those who are best remembered are Mr. Gore-Ouseley, who conducted the first regular settlement of the *cis*-Jhelum tract and held charge of the district during the Mutiny, and Captain (afterwards Sir W. G.) Davies who completed the first regular settlement of the Khusháb Tahsíl, re-organized the whole system of the revenue administration, constructed many of the roads, encouraged the excavation of

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District Officers.

canals, and improved the towns. Several villages have been named after him, and of all its English rulers he has left the strongest impress on the district.

A list of Deputy Commissioners from 1896 to 1914 will be found in Table No. 33. Mr. (afterwards Sir J. Wilson is remembered (rather as Settlement Officer than as Deputy Commissioner) for the thorough excellence of his revision of the Record of Rights, and the fairness with which he distributed the land revenue demand. Of his successors Mr. French and Major O'Brien are those most frequently mentioned by the villagers as models of what a District Magistrate should be. Messrs. Hailey, Smith, and Rudkin, who at various times were in charge of the adolescent Canal Colony, will long be gratefully remembered.

Important dates in the history of the district.

The most important events in the history of the district from the economic point of view have been as follows:—

Railway from Lála Músa to Malakwál opened ...	1886
Extended to Miáni and Bhera	1887
Extended to Khewra Salt Mines	1887
Extended to Khusháb	1887
Extended to Shershah	1889
Extended from Malakwál to Sargodha ...	1903
Extended from Sargodha to Shorkot Road ...	1906
Macnabbwah Canal excavated	1860
Kálra Canal excavated and Kálra colonized ...	1861
Other inundation canals dug	1863-1870
Lower Jhelum Canal began to irrigate ...	1901
Alienation of Land Act came into force ...	1901
Gram cultivation in the Thal started ...	1903
Co-operative Credit Societies started	1909

Section C*.—Population.

Population.

Distribution of population.

Table No. VI gives separate statistics, for each tahsíl and for the whole district, of the total area (cultivated, culturable and cropped), of the total population (urban and rural), of its distribution over area of the inhabited villages classified according to the population they contain and, lastly, of the number of persons per occupied house, which are given separately for towns

* The remarks in this section are taken principally from the Census Report of 1911 and refer to the statistics of that year.

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Distribution of population—(a) Urban.

and villages. The number of occupied houses in each town is given in Table No. VII. Their total population was as follows in 1891 and 1911 :—

Name of Town.	Total.		Males.		Females.	
	1891.	1911.	1891.	1911.	1891.	1911.
Miáni	7,149	5,819	3,590	2,849	3,559	2,970
Bhera	17,428	15,202	8,979	7,950	8,449	7,252
Shahpur Town ...	6,337	5,608	3,200	2,833	3,137	2,775
Shahpur Civil Lines ...	2,896	3,131	1,932	1,927	964	1,204
Sáhíwál	9,210	7,658	4,550	3,858	4,660	3,800
Khushab	9,832	10,159	5,032	5,333	4,800	4,826
Sargodha	...	8,849	...	6,180	...	2,669

(b) Rural.

The statistics for the district as a whole give the following figures :—

	Census of		Census of	
	1881.	1891.	1891.	1911.
Percentage of total population who live in villages. — Persons ...	87·76	89·3	89·3	91·8
Percentage of total population who live in villages. — Males ...	87·97	89·4	89·4	91·7
Percentage of total population who live in villages. — Females ...	87·52	89·1	89·1	91·8
Average rural population per village	568	630	630	595
Average total population per village and town ...	642	699	699	645
Number of villages per 100 square miles	14	15	15	21
Density of population per square mile of — Total area ... Total population ...	90	104	102	135
Density of population per square mile of — Total area ... Rural population ...	79	93	91	124
Density of population per square mile of — Cultivated area — Total population ...	514	501	493	356
Density of population per square mile of — Cultivated area — Rural population ...	451	447	440	321
Density of population per square mile of — Culturable area — Total population ...	108	159	149	163
Density of population per square mile of — Culturable area — Rural population ...	94	142	134	147

Distribution over towns and villages.

The proportion of rural population to total population increased from 87·8 per cent. in 1881 to 91·8 per cent. in 1911, so that the

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Population.

Distribution over towns and villages.

population of the villages is increasing faster than that of the towns. The same fact may be stated in another way. The population of the six old towns increased from 52,852 in 1891 to 56,426 in 1911, an increase of only 7 per cent. against an increase of 39 per cent. in total population. The gradual growth in the size of villages is shown by the following figures :—

Population	Number of towns and villages: In 1881.	In 1891.	In 1901.	In 1911.
Over 10,000 souls	1	1	2	2
5,000 to 10,000 "	4	7	7	7
3,000 to 5,000 "	9	13	40	52
2,000 to 3,000 "	20	26		
1,000 to 2,000 "	71	85	99	100
500 to 1,000 "	144	157	150	258
200 to 500 "	210	205	496	647
Under 200 "	198	212		
Total inhabited villages ...	657	706	794	1,066

The number of villages of each size has increased considerably, which shows that the increase of population has been pretty evenly distributed over all sizes of villages. The number of inhabited villages and towns has increased from 706 to 1,066* and the average population per town or village has decreased from 699 to 645, which is much above the average for the Province, 595. It must be noted, however, that many of these so-called "villages" are in reality very large estates or townships, and that their population is often not collected in one "village" in the English sense of the term, much of it being found in hamlets situated at some distance from the parent village. This is especially the case with the large estates in the Mohar at the foot of the Salt Range, where the parent village is generally found close to the foot of the hill with several outlying hamlets up on the hill or out on the plain, all within the boundaries of the estate and, therefore, included in

* In addition to this number one new estate apiece was created for the Shahpur and Khusháb Tahsíls during the recent settlement, and the Forest Blocks have been renumbered. Seventy nine estates have been transferred to Gujrát District.

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Distribution over towns and villages.

the "village" for census purposes. Again, in the river valleys it is common for the owners of a well situated some distance from the village to build huts at the well, and practically to live there with their cattle. So that the population is not so closely grouped together as would appear from the high average per village. In the Thal, although the pastoral people wander considerable distances from the village with their cattle, it is not usual for them to establish a fixed residence away from the village, and their homes are, as a rule, closely grouped together into comparatively large villages; there are signs, however, of a centrifugal tendency in this tract also, and it is possible that a system of habitations round scattered wells may before long spring up.

The housing of the population

Tables 6 and 7 give statistics which show the distribution of the population over houses, in towns and villages. The figures for the last four decades may be compared as follows:—

Number of persons per 100 occupied houses in	1881.	1891.	1901.	1911.
(a) towns	582	515	510	440
(b) villages	584	550	510	400

Some allowance has to be made for variations in the definition of the word "house" by various Census Superintendents; thus in 1881 there were 135, and in 1891 there were 116, families living in every 100 village houses, whereas in 1911 the definition of "house" was so framed as to make it almost equivalent to "family." Even so there is a clear tendency towards severalty of interest and separation into smaller family groups. In the villages this may almost certainly be regarded as an indication of increased resources. In the towns the average number of persons per occupied house is now lowest in Bhera (3·69), Sáhíwál (3·70) and Miáni (4·07) and highest in Sargodha (4·59), and these figures may be taken partly as an index of the extent to which trade has forsaken those markets which are not on the main lines of communication with Karáchi, and partly as a record of plague mortality.

Grouping of houses in towns and villages.

There is nothing very distinctive about the arrangement of the houses in most of the old towns and villages in this district. The dwellings are clustered together in a thoroughly haphazard manner, and the only principles of town-planning generally recognized are those which relegate the lowest grades of menials to the outskirts of the towns, and group the other non-owners round

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Grouping of houses in towns and villages.

the homestead of the particular owners under whose patronage (*sáya*) they carry on their trades or labour. Miáni, Bhera, Sáhíwál, and Khusháb were all dignified with city-gates and straight, pavèd market-streets or squares in the time and under the influence of Captain Davies; and the Shahpur Civil Station was laid out on a pre-conceived plan. In the villages, the court-yards are generally rather spacious, in comparison with the smallness of the buildings and the narrowness of the streets. In the Thal particularly, where all the villages are built on sand-ridges, and there are wide spaces between house and house, there is never any lack of air. But in other respects it may be said in general terms that town-planning is unknown in the older habitations. In the colony, on the other hand, there has been a distinct endeavour to lay out the towns and village sites on lines calculated to facilitate ventilation and cleanliness, and although the earliest colonists were inclined to resist what appeared to them to be grandmotherly interference, the advantages of straight, wide streets have now won a certain amount of recognition throughout the district. In fact, one old village—Másar—in Shahpur when attacked by plague, was entirely abandoned by the inhabitants, who built for themselves a new village on approved colony lines.

Growth of population and density.

The total population of the district and its density per square mile of cultivated area at different periods will be seen from the following table:—

Date of Census.	Population.	Increase per cent. Since 1855.	Increase per cent. Per annum since previous census.	Total cultivation in square miles.	Density per square mile of cultivation.
1855	302,700	...	...	476	636
1868	368,288	22	1·7	662	556
1881	421,508	39	1·1	820	514
1891	493,588	63	1·7	1,002	493
1901	524,259	73	·6	1,187	442
1911	*687,366	127	3·1	1,930	356

*NOTE.—About 38,400 of this number reside in villages since transferred to Gujrát.

Cultivation has increased so much more rapidly than population that at each successive census, although the total population

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Growth of population and density.

has shown a large increase, the density per square mile of cultivation has been less than at the previous census; and when the great development of irrigation from wells, canals and embankments is taken into account, it is clear that the prosperity of the district as measured by the amount of produce per head of population has experienced a great and steady increase. During the last decade, the rapid growth of the Lower Jhelum Canal Colony has eclipsed the advances of the preceding period, though they too were by no means inconsiderable.

Distribution over natural divisions.

The distribution of the population over the different physical divisions of the district will be seen from the following statement :—

Tract.	DENSITY OF POPULATION PER SQUARE MILE.			
	Total area.		*Cultivated area.*	
	1891.	1911.	1891.	1911.
Chenab valley	189	187	488	357
Bár upland	55	179	603	275
Jhelum valley	261	251	555	453
Ara tract	93	141	335	221
Thal desert	16	23	511	222
Mohar	70	79	378	344
Salt Range	103	128	473	555
Total district ...	102	135	493	356

At last settlement, the Jhelum and Chenab river valleys supported a far heavier population per square mile of total area than any other part of the district. Now the pressure in these two tracts has been slightly lightened, while there has been a notable increase in the Bár and Ara tracts, thanks to the Lower Jhelum Canal. The population of the Thal is still extremely sparse.

The density per square mile of cultivation is highest in the Salt Range, where the healthy climate encourages rapidity of increase in a robust population, and the nature of the countryside precludes large extensions of cultivation. Here the pres-

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Distribution over natural divisions.

sure (555 to the square mile) is considerably higher than the Provincial average (499), and than that of any part of the Punjab except the Himalayan and Sub-Himalayan tracts. In the Jhelum valley, a decrease of population combined with a great increase of cultivation by means of the Lower Jhelum and Inundation Canals has considerably lightened the pressure, which is now only 453 per square mile of cultivation. In the Bár and Thal pastoral habits have yielded largely to agriculture, and there has been a remarkable alteration in the figures; in the Bár it is of course the canal, and in the Thal the discovery of gram as a crop, that have made the difference. But pressure is still lightest in the Ara tract, where there has been no incursion of colonists to share in the new canal irrigation.

Migration.

In 1897 Mr. Wilson wrote that "the Shahpur District attracts a smaller proportion of immigrants than do most districts of the Province." This is no longer true. In 1911 it was found that out of 687,366 persons enumerated in the district only 542,041—or 78·8 per cent.—were Shahpurís by birth: the provincial average of intra-district births is over 88. In fact there are only five districts which have attracted more outsiders, and Lyallpur and Lahore alone have gained more from non-contiguous districts. On the other hand, it appears that 35,457 Shahpurís had emigrated to other parts of India. There must also have been a certain, though small, amount of emigration to other parts of the world. The total gain by migration has therefore been 109,868 souls, less those who have travelled beyond the boundaries of India. Twenty years ago, there was a net loss of 249 souls; in this respect as in so many others, the canal has made all the difference.

Migration-routes.

Of the 145,325 immigrants 84,147 came from contiguous districts; 52,269 from other districts and states in the province; 6,500 from other parts of India (principally Kashmír, Dera Ismail Khan, Peshawar, Bíkáner and Meerut); and 2,325 from other countries in Asia, practically all of these being Pawindas or other seasonal visitants from Afghánistán.* Only 84 persons were born outside Asia, and 76 of these were natives of the United Kingdom. The figures in the margin show the districts which did most to supply new blood for the district. There are no less than

Gujrát ...	... 30,138
Siálkot ...	... 29,301
Jhang ...	... 21,427
Jhelum ...	... 17,033
Gujránwála ...	... 12,080
Amritsar ...	... 6,249

*These Afgháns generally make themselves very unpopular in the villages along their line of march, owing to the damage they do to standing crops. In the localities in which they stop and work, much is forgiven them, for their great utility.

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141,073 immigrants in the area commanded by the Lower Jhelum Canal.

Migration-routes.

Of the 35,457 emigrants traceable, 30,966 were enumerated in the Punjab, and 4,491 in the North-West Frontier Province and other parts of India. The six neighbouring districts absorbed 18,847; Lyallpur took 4,489; Lahore 1,629; and Multan 1,367.

Migration and sex.

Twenty years ago the immigrants were found to consist of 17,414 males and 19,264 females, in spite of the fact that more males than females came from every district except Jhelum, Jhang, Gujrát and Gujránwála. This clearly indicated that much of the migration to and from the contiguous districts was due to the exchange of women in marriage. This exchange still continues; thus we find that these same four districts absorbed 8,883 female emigrants as against 6,664 male. But owing to the large number of colonists who have come in as bachelors or "grass-widowers," there is now no single district which has given Shahpur more women than men; and altogether there have only been 57,825 female immigrants for 87,500 male. For both sexes the canal area has irresistible attractions; it is in the nature of things that where women are a marketable commodity, the best market will be that in which the demand is most in excess of the supply and purses are longest; and even a woman who can choose her own mate will be apt to prefer the ampler life of a tract where holdings are large and rivals comparatively few.

	Males.	*Females.*
Colony area ...	85,207	55,866
Non-colony area ...	2,293	1,959

The balance of emigration is also in favour of the males, but the excess (19,723 male emigrants as against 15,734 female) is insignificant, and is surprisingly small when one remembers that large numbers of Tiwánas, Awáns, and Baloches are serving in the army, and that the district has only 82 women for every 100 men. At last settlement there was actually a gain by migration of 1,254 females as against a loss of 1,503 males, so that the tendency at that time was towards levelling up the sexes; now the natural discrepancy is further enhanced by migration. The importance of this fact will be dealt with in a subsequent paragraph.

Age and caste of immigra[nts].

It would naturally be expected that the attractions of the colony would draw to the district a supply of new blood of good quality, and the statistics indicate that this has actually happened. The subject is dealt with in some detail in paras. 111-112

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Age and caste of immigrants.

of the Punjab Census Report. The percentage of total immigrants belonging to the more important castes is shewn in the margin. In addition to these Patháns, Baloches, Sayyads, Rájpúts, Awáns and Khokhars supplied 7·2 per cent. between them, and Aráíns,

Jats	...	27
Sweepers	...	9
Aroras and Khatrís	...	3·3

Mochís and Gujars each supplied over 1 per cent. The agricultural castes brought with them about 2 females for every 3 males; the artizan and trading castes brought about 4 females for every 5 males. Again, the agriculturists brought 33 children (under 16) and 24 elders (over 40) for every 43 persons in the prime of life; the menials brought more children and fewer elders, and the traders fewer of each. From this it may be predicted that natural reproduction will proceed most rapidly among the menials and least rapidly among the agriculturists; and in a tract where hired labour is necessary but expensive, and commercial development is apt to lag behind agricultural, this is all the better for the farmers. So it seems that the general position as regards the quality of the colonists is satisfactory.

Age.

The distribution of population according to age, sex and civil condition will be found in Table 10, both for the district as a whole, and grouped by religions.

The discussion of ages is an unprofitable task where the figures are mainly the offspring of guess-work and superstition. Among the more important reasons that make for error are (1) sheer ignorance: (2) desire to claim a certain status, *e.g.*, an unmarried damsel will often, for very shame, declare herself to be too young for matrimony, and will even more often be declared by her lawful guardian to be too young to be excluded from the legal definition of minor; again a youth rather too young for a coveted appointment will overstate his age, while any official in danger of superannuation will understate it: (3) vanity; one grey beard will resort to henna-dye and claim to be in the prime of life, while another will find more dignity in patriarchal longevity: (4) maternal solicitude; a child in robust health will be recorded as older than his real age, in order to avoid the evil-eye; while a weakling will have a year or two knocked off, in order to conceal his backwardness.

An amusing proof of the extent to which the people have given their ages in round numbers is afforded by the following

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Age.

comparison :—

Age.	Number of males returned in 1881.	Number of males returned in 1891.	Number of males returned in 1901.
40-44	14,536	8,751	15,959
45-49	7,220	13,023	9,573
50-54	12,278	5 895	12,847
55-59	3,624	10,672	5,389
60 and over	18,582	11,958	20,533

The reason of this alternation must be that in 1881 and 1901 the age returned was the age last birthday, and in 1891 the age next birthday pushed back a year, so that, for instance a man who said his age was about 50 was shown in 1881 as 50, and is shown in 1891 as 49, and the round numbers have the best of it in the statistics for 1881, and the worst of it in those for 1891. This throws a doubt upon all the age statistics over ten years of age.

Again the ages of children are open to a good deal of doubt. Here also it seems clear that in 1891 the 5-year olds were placed in the first group, while in 1901 and 1911 they were placed in the second and similarly with the 10-year olds. For Table 11 shews that from 1891 to 1900 the birth-rate was not appreciably lower than it was from 1885 to 1890, and there was no special mortality just before the 1901 Census.

Number of children in	Aged 0-4.	Aged 5-9.
1891	90,507	72,489
1901	75,131	74,773
1911	101,015	98,586
Number *per mille* of total—		
1891	183	147
1901	143	142
1911	147	143

With these considerations in mind we may compare the existing state of affairs with that which preceded the opening of the canal, and with that of the Province as a whole. There has been a marked rise in the percentage of adults, naturally enough,

Description.	Age.	Number.	NUMBER *per mille* OF POPULATION.		
			1911.	1901.	Provincial average.
Children ...	0-9	199,601	290·5	286	272
Adolescents ...	10-14	131,513	113	115·5	112
Adults ...	15-39	262,964	382·5	368	395
Elders ...	40-59	107,520	156·5	160·5	162·5
Patriarchs ...	60 and over.	39,634	57·5	70	58·5

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and a corresponding drop in the figures for elders and patriarchs: but it is surprising that, in spite of the influx of unencumbered colonists the proportion of adults in the prime of life is still below the provincial average, and that the number of children is so great. The main reason must be the plague of 1904 and 1907, which took heaviest toll from those in the prime of life: but probably also the increase in resources has encouraged the begetting of children. So the gain in youth and middle age has been entirely at the expense of the old.

Increase due to natural reproduction.

In 1891 there were 456,910 natives of Shahpur still resident in the district; in 1911 there were 542,041, giving a natural increase of 19 per cent. or ·95 per cent. per annum. From 1855 to 1891 the annual natural increase was about 1·45 per cent. of the native population of 1855 (which may be taken as approximately 300,000). *The set-back which these figures indicate* is no doubt due *to the occurrence in quick succession* of three years so disastrous as 1904, 1907 and 1908.

Vital statistics.

The birth and death statistics tell the same tale :—

Period.	Birth.	Deaths.	Total increase or decrease.	Birth rate per 1,000 of total population existing at beginning of period.	Death rate per 1,000 of total population existing at beginning of period.
1881—1890 ...	169,401	117,846	+51,555	37	26
1891—1900 ...	195,709	157,089	+38,620	40	32
1901—1910 ...	235,369	247,506	−12,137	45	47

It is of course impossible to reconcile entirely the census returns with the vital statistics derived from birth and death registers. Thus, the total population of the district in 1901 was only 524,259, and according to the vital statistics, the number of Shahpur-born residents ought not to have exceeded 512,122; but the census returns show 542,041. The discrepancy may be partly accounted for by the inclusion in this district of 21 villages in the Kirána Bár during the decade; also it is highly probable that a number of residents who were driven out of the district by the lean years that ushered in the century returned as soon as the canal began to irrigate. Possibly the female births (110,896 as against 124,473 males) have been understated, and in any case it is only to be expected that a registering staff

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Vital statistics.

of village watchmen should fail to give unimpeachable results. The fact that there has been a steady rise in the rates both of birth and death gives some ground for believing that registration is becoming gradually more universal. Recent statistics appear to indicate that, in the absence of any serious visitation of disease, the normal birth-rate for the district is 45 and the normal death-rate 30 per thousand; this means a natural increase, under favourable conditions, of 1·5 per cent. per year, and this is not likely to lead to overcrowding for many years to come.

Variations in the birth and death rates.

Unfortunately during the past decade conditions have often been far from favourable, and wide departures from the normal rate have been common. The average death-rate for the decade ending 1911 is 47·2 per thousand per annum as against 43·6 for the Province. The birth-rate is 44·9 as against 40·8 for the Province. Table 11 shows the details for each year since 1901, together with the actual mortality from fever, plague, small-pox and cholera; table 12 shows the deaths from fever compared with the deaths from all causes, for each month since January 1901. Two facts emerge clearly :—(*a*) the death-rate for the year is more affected by an epidemic of plague than by a severe outbreak of fever; even the worst fever year (1908) only shows a death-rate of 53·3, which is far below the rates (97·3 and 90·7) of the two worst plague-years (1904 and 1907); (*b*) a severe outbreak of fever is more potent than plague to reduce the birth-rate in the succeeding year: the three years in which the fever-mortality was highest (1892, 1908 and 1903) were all followed by years of low birth-rate (30, 43 and 35). But these two factors cannot always be disentangled, and it stands to reason that in a year in which fever or plague is carrying off women in thousands, the birth-rate for that year will be affected. Thus it is hard to say how far the low birth-rate of 1904 was due to the fever of the preceding year, and how far to the plague that broke out during the year. The birth-rate in 1908 (50·5) is surprisingly high, in view of the fact that a large number of young married women must have succumbed to plague in 1907, and many more to fever in the autumn of 1908; it looks as though the women who survived June 1907 enjoyed 14 months of unusual fecundity. Nor is it easy to account for the high birth-rate of 1910 (56·3) or the low rate (39·6) of 1911; fever was distinctly bad in the first half of 1909, while 1910 was comparatively free; in neither year was plague serious and even in 1911 it was hardly sufficient to explain the low birth-rate. Here again one might almost say that the appalling mortality from fever from September 1908 to June 1909 induced greater

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Variations in the birth and death rates.

fecundity in the surviving women in the succeeding twelve months, followed naturally by a period of "fallow"; it is impossible to suppose that the high birth-rate of 1910 was restricted to those parts of the district which are least subject to fever, for it can be seen from table 13 that the towns of the Jhelum valley also shared in the general rise.

The effect of good or bad crops upon the birth-rate is rather obscure, and is probably not very considerable, but it is possible that the low rates of 1888 and 1900-01 were due to scarcity: certainly the statistics do not suggest that hard times produce more babies, as is sometimes maintained.

Monthly mortality.

In the days when plague was unknown, the healthiest months were February, March, April, July and August. May and June were the worst months for cholera, and from September to January, fever was doing its deadly work. The experience of the past 10 years (table 12) shows August and September to be the months in which fewest deaths occur. Fever is most fatal in December and January; it is only slightly less so in November and October, and sometimes June and July show a large number of deaths, which may probably be attributed to the abrupt changes of temperature at the break of the monsoon. In fact there appears to be a general connection between the fever mortality and the mean minimum temperature, especially in the early winter months. In February and March, though nights are cool, deaths from fever are not common; probably those who have survived the coldest months are proof against the milder rigours of the winter's close. April, May, August and September seldom have many deaths from fever, though no doubt the seeds of many fatal attacks are sown in the last-named month. Plague seldom becomes serious until the winter is half over, and it increases in virulence as spring advances, not abating appreciably till June; April and May are far the worst months.

Disease.

The district is on the whole comparatively healthy, in spite of the fact that the average death-rate for the ten years ending 1911 was 47 per thousand per annum against 41 per thousand for the Province. The normal mortality, both for the district and for the province, is of course far lower than these figures suggest. For the 18 year period preceding 1904, the district average was 29·5 per thousand. But in 1904 and 1907 the figures were raised by severe visitations of plague to 97·3 and 90·7 respectively, and in 1908, which was an unusually wet year, a severe outbreak of fever caused an abnormally high death-rate (53·3). Plague is a much dreaded invader, and when it is

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remembered that it caused 37,278 deaths in 1904 and 31,433 in 1907 (not to mention the milder onslaughts of 1905, 1911 and 1915), the dread becomes intelligible; but in the long run fever is much the more deadly enemy; year after year it claims at least 8,000 victims, and in 1908 out of 27,922 deaths no less than 21,466 were due to fevers. Like the rest of the Punjab this district suffers severely in the autumn months from intermittent, and to a less extent, from remittent fevers, more especially along the banks of the rivers and in the villages near the foot of the Salt Range. In November and December the fever is often complicated with pneumonia and bronchitis, and dysentery and diarrhœa are common symptoms of the disease. Towards the end of the season, enlargement of the spleen is often prevalent.

The district is subject also to visitations of cholera, one of which in 1888 attacked 5,918 persons and carried off 3,924, raising the death-rate for the year to 34 per thousand, and another in 1892 attacked 5,830 persons and carried off 3,090. The villages most liable to this much dreaded pestilence are those in the Salt Range and at its foot where the water-supply is limited to a very few springs, ponds, or wells and is easily contaminated. Several of these villages were literally decimated by cholera in less than a month. In the towns greater attention is paid to sanitary measures and especially to the protection of the water-supply, and probably for this reason the ravages of cholera are generally less serious. For the last twenty years there has been no serious outbreak of cholera, though from time to time as many as 300 deaths may occur in the year. In 1912 small-pox carried off 2,164 persons, of whom 1,639 were children. Apart from the chief visitations of plague, the worst year within living memory for the public health was the year 1892 when a cholera visitation in the hot months was followed by heavy rains and high floods, causing an epidemic of fever which attacked at least 80 per cent. of the total population. Owing to this combination of diseases the total death-rate for the district rose for the year to 56 per thousand. For the month of October it was at the rate of 156 per thousand per annum. The town of Bhera lost in the year, chiefly from fever and its sequelæ, 1,278 of its 17,428 inhabitants; and the town of Sáhíwál 890 of its 9,210 inhabitants: that is, 97 per thousand of its inhabitants died within the year. In 1908 when there was but little plague, Bhera town lost as many as 1,907 inhabitants of whom 1,586 succumbed to fever. The prevalence of fever is perhaps chiefly due to the carelessness of the people in the matter of avoiding chills, but one of its causes is want of good drainage, and endeavours are being made to improve the

drainage of the towns of Bhera and Sáhíwál which suffered the most.* CHAP. I-C. Population.

Disease.

On the right bank of the Chenab, especially at Midh, goitre is common, and the very dogs, cows, and even trees are said to suffer from it; it is probably due to the quality of the water in the wells. Guinea-worm is frequently met with in the villages along the foot of the Salt Range, where the inhabitants often use water taken from stagnant ponds, rendered filthy by the cattle which are allowed to wade in them. Stone in the bladder is common throughout the district.

The measures taken to combat these various diseases are discussed in Chapter III, in connection with the medical administration.

Infirmities.

It will be seen from table 14 that there has been a steady improvement in the amount of affliction by blindness, muteness, insanity, and leprosy, both absolutely and, even more, in relation to the total population, since 1881. Every successive census has shown a marked improvement, and there is no reason for distrusting the figures. It is noticeable that in each class of infirmity more men are afflicted than women; up to 1901, the proportion of blindness was always higher among females. The improvement in the amount of blindness is particularly satisfactory, and must be largely ascribed to the readiness of the peasants to take their eye-troubles to the hospitals—especially to Bhalwal hospital. Those who have shuddered at the swarms of flies clustering round the eyes of children in towns and villages may derive some comfort from the fact that only two children in a thousand grow up to a life of total blindness On the other hand, the eyesight of boys at the end of their school career is often unsatisfactory. The present editor has had to reject many applicants for the post of *patwari* on this ground.

	No. of persons.		No. per 10,000.	
	1881.	1911.	1881.	1911.
Blind ...	2,866	1,522	68	22
Deaf and dumb	721	650	16·5	9
Insane ...	362	172	8·5	2·5
Lepers ...	90	22	2	...

Infant mortality.

Some idea of the appalling loss of infant life will be gained

* These words were written by Mr. Wilson in 1897: the endeavours continue; so does the suffering—(M. S. LEIGH, 1915).

Infant mortality.

from these figures :—

Period 1901—1910.	Total births registered.	Children dying under one year old.	Children dying between one and five years.	Total of deaths under five years.	Total of deaths over five years of age.
Male	124,473	28,432	20,275	48,707	78,345
Female	110,896	24,339	20,260	44,599	75,855
Total ...	235,369	52,771	40,535	93,306	154,200

This means that out of every 100 children born, 40 die before they are five years old; the rate being just under 40 for boys and just over for girls. And out of the 40, more than 22 fail to live a full year (23 in the case of boys, and 22 in the case of girls). Out of every 100 deaths, 38 take off children under five years old, and more than 21 take off infants under one year. We shall see in the next few pages that the greater difficulty of rearing infant boys tends to neutralize a preponderance of male births. It is not till later in life that the effects of neglecting girls begins to tell. But there can be no doubt that a great deal of the waste of life in both sexes could be prevented by cleanliness, care, and recourse to the hospital.

Birth customs.

On the birth of a child in a Muhammadan family the *mulláh* is sent for, who utters the call to prayer in the child's ear, and receives a small present. After a week the child's head is shaved by the *nai* or barber: the child is then named by the head of the household; food and sweets are distributed, and the barber and other menials are given small presents. The ceremonies are the same in the case of boys and girls, but the rejoicings are greater in the former case. Sometimes a goat is sacrificed but this custom is not general, being confined to well-to-do persons. Circumcision (*sunnat*) can be performed by the barber any time after the child is a week old, but generally when he is 3 or 4 years old.

Among Sikhs the naming ceremony of boys is as follows :— A month after birth the child is taken to the *dharmsála*, the *Granth Sáhib*, or sacred book, is opened at random by the *Bhái* or some respectable man: and the 1st letter of the 1st verse on the page is the first letter of child's name. *Karáh parshád* is then distributed among the audience and the near relations.

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Birth customs.

Among other Hindus of the Sahjdhári sect the custom is similar but the child is often named either by some respectable member of the family or by a Pandit after reference to the *tewa* or *janam patri*; at any time from 6 months to 5 or [illegible] years, according to the custom of the family, the head is shaved, and on this occasion the sacred thread *janeu*) is sometimes put on : this ceremony is a time of rejoicing, and the relations and acquaintances are fed by the parents.

Sex.

According to the different censuses the proportion of males to females has been as follows :—

Year of census.	NUMBER OF FEMALES PER THOUSAND MALES.				
	Total District.	Tahsíl Bhera.	Tahsíl Shahpur.	Tahsíl Khusháb.	Tahsíl Sargodha.
1855 ...	862	...	...	...	...
1868 ...	889	877	873	914	..
1881 ...	901	862	899	956	...
1891 ...	912	887	905	953	.
1901 ...	919	901	893	969	...
1911 ...	824	783	879	959	689

The gradual rise in the proportion of females from 1855 to 1901, and the sudden drop after that date, are very marked : probably the former was largely a matter of closer enumeration (though we have also seen that the balance of trade in the matter of brides was in favour of this district) : the latter is due partly to the effects of plague and partly to the colony. It will be seen that in *Tahsíl* Sargodha, where there was practically no cultivation in the old days, the proportion of females is very low ; in Bhera, where there are a number of colony *chaks*, there has been a marked drop ; in Shahpur, the immigrants have mostly been tenants for old established villages ; and in Khusháb, where there is no canal cultivation to speak of, the women are relatively more numerous than they were 20 years ago, and much more so than in any other part of the district. As a matter of fact the real proportion of women to men in Khusháb is not so high as it looks, as many of the men of that tahsíl are always absent, either on military service, or on the "squares" of themselves or others.

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Population.

Sex.

Even apart from the effects of plague and migration the women are too few for the men. The natural born population has only 869 females per 1,000 males. This appears to be to some extent due to a majority of male-births, for, however doubtful the registration figures may be, the fact that in every single year since 1891 there has been a majority of males registered must represent a real excess. But here as elsewhere the boys are harder to rear, especially in the first year of life, and probably if the number of children less than one year old at the time of the 1911 census were known, it would be found that the boys and girls were nearly equal: in 1891 there were 11,339 infant boys to 11,360 infant girls, and the census Report for 1911 shews that in the North-West Punjab there were 955 girls for every 1,000 boys. From the second year onwards however the boys have a much better chance of survival; reasons for this are not far to seek. Although there is no reason to suspect female infanticide or systematic neglect of female children there is no doubt that they are less valued than male children and not so well fed in times of scarcity. Boys and men too live a much more healthy out-of-door life than do girls and women, and the dangers of child-bearing are a frequent cause of death, especially in a country where early marriages are common, and where so little medical aid or proper nursing is given to women at child-birth. Yet the steady increase in the proportion of females to males at each successive census up to 1901 may perhaps show that the value of female life is improving. After the years of infancy a girl is by no means without her value in the eyes of her parents. She forms a most useful member of the family while she remains with it, and when she is of marriageable age, if she does not bring in a money price, she can at least be bartered for a bride for one of the sons. After marriage, she generally forms a useful helpmate

		Boys.	Girls.
Number of briths, 1896—1900	...	53,473	49,392
Number of children under 5 in 1901	...	38,007	37,124
Number of births, 1906-1910	...	67,145	59,414
Number of children under 5 in 1911	...	51,932	49,083

Number of females per thousand males for different age periods.

0-4	945
5-9	872
10-14	726
15-19	736
20-39	841
40-59	805
60 and over	712

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Sex.

to her husband, and is valued by him, if for nothing else, at all events for the cost of getting her or of replacing her. The low figure for the ages between 14 and 20 is misleading; as already explained, if a girl is unmarried after puberty, she will almost certainly be returned as adolescent; and if she is married, she will probably put her age as at least 20. But the low rate for the adolescent period must be principally attributed to the plague of 1904, which carried off 104 females per 1,000, as against 90 males. The sudden rise after the age of 20 is only in part accounted for by the self-importance of the young bride; naturally the greater number of the female immigrants would have been young adult women of 20 or over.

The various factors that have contributed to the existing sex distribution may be disentangled as follows:—

	Males.	*Females.*
Increase in population between 1891 and 1911—	*118,739*	*75,039*
(*a*) Natural increase; births from 1891 to 1911.	227,195	203,883
Less deaths from 1891 to 1911 ...	−209,780	−194,815
Net increase ..	17,415	9,068
(*b*) Gain by immigration: immigrants in 1911.	87,500	57,825
Less immigrants in 1891 ...	17,414	19,264
Net increase ...	70,086	38,561
(*c*) Gain by return of emigrants from Punjab and North-West Frontier: emigrants in 1891.	18,417	18,019
Less emigrants in 1911 ...	18,192	14,617
Net increase ...	225	3,402
(*d*) Gain by return of emigrants from elsewhere: emigrants in 1891.	1,544(?)	1,125(?)
Less emigrants in 1911 ...	1,531	1,117
Net increase ..	(13) ?	(8) ?
(*e*) Unaccounted for	31,000	24,000

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Part of the last item may be assigned to the 21 villages transferred from Jhang to this district between 1901 and 1911, and the rest must be due to faulty registration, especially in the earlier portion of the period; from 1901 to 1911 the corresponding discrepancy for the two sexes together is less than 30,000.

Sex and religion.

Taking the figures for the different religions the proportions are as follows :-

Religion.	Females per thousand males.		Number of children per thousand of total population.			
			Under five years.		*Five to nine years.*	
	1891.	1911.	Males.	Females.	Males.	Females.
Hindu	935	800	65	64	70	62
Sikh ...	896	795	72	67	77	61
Musalman	909	829	76	72	77	67
Christian	818	771	94	87	82	71

It is worth remarking that in 1891 the Hindus had a considerably higher proportion of females than the Musalmáns. The difference must be due to the fact that whereas in 1891 practically all the Hindus of the district were resident traders, in 1911 there were a considerable number of Jat colonists, and mercantile pioneers in the new colony towns. Plague too has taken heaviest toll from the town-dwelling females. This would also explain the small proportion of Hindu infants of both sexes. The Christians, again, are nearly all low caste colonists; their high percentage of children can only be attributed to their great fecundity. The Musalmán naturally finds it easier than others to get a wife from among the local population, and hence, even though the agricultural colonists brought comparatively few women with them, they have been able to keep up their proportion more successfully. The number of Muhammadan girls is satisfactory. The Sikhs have the smallest proportion of girls to boys, as was also the case at last settlement.

The fact that in each of the main religions there are more boys and less girls between 5 and 9 years than there are under five years can be explained as follows : we have already seen that children declared as five years old have been recorded in the older

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Sex and religion.

group; and as five is both a lucky age, and a good round number, many four-year olds have certainly been promoted out of the youngest group; so in each sex the youngest group should be enlarged and the elder group reduced. Probably, if a similar allowance be made for nine-year olds, described as ten-year olds, the true figures would be something like this :—

Religion.	Under five years.		Five to nine years.	
	Males.	Females.	Males.	Females.
Hindu	70	67	67	61
Sikh	77	70	74	60
Musalmán	79	75	76	66

From this we can see how early neglect tells on the vitality of girls, especially among the Sikhs.

Conjugal condition.

The figures for conjugal condition are as follows :—

Year.	Proportion per thousand of all conditions.					
	Males.			*Females.*		
	Single.	Married.	Widowed.	Single.	Married.	Widowed.
1881	581	376	43	442	436	122
1891	581	375	44	459	427	114
1901	588	368	44	461	423	116
1911	572	367	61	444	441	115
Provincial average, 1911	528	388	84	377	480	143

It is clear that compared with the Province as a whole this district has a large nnmber of bachelors and spinsters; even in the North-West Punjab the average proportion is 571 bachelors and 439 spinsters.

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Population.

Conjugal condition.

The figures for the different religions are as follows:—

Religion.	Year.	PROPORTION PER THOUSAND OF ALL CONDITIONS.					
		Males.			*Females.*		
		Single.	Married.	Widowed.	Single.	Married.	Widowed.
Hindu ...	1891	559	395	46	388	459	153
	1911	548	387	65	387	449	16[illegible]
Sikh ...	1891	522	432	46	376	498	126
	1911	560	370	70	397	468	135
Musalmán ...	1891	586	370	44	472	421	107
	1911	575	367	58	454	438	108

All religions have a higher proportion of widows and widowers; but the increase among Muhammadan widows is slight, while among Hindus it is great. Plague has hit the towns harde than the villages, and even in the towns the Muhammada widows of eligible age remarry. There are fewer bachelors tha formerly among the Hindus and Muhammadans, which is at firs sight surprising : probably the explanation is that the hig death rates of the past decade have reduced the numbers of mal infants out of proportion to the total male population. The increase of bachelors among the Sikhs is clearly due to the migration of young men from the Central Punjab. It is rather surprising to find so many spinsters among the Sikhs, but they hav considerably raised their marriage age. There are fewer Muhammadan spinsters than heretofore, thanks to the shortage o wives : even the most ill-favoured damsel is now sure of a husband.

The age of marriage.

Judged by the figures, the age of marriage is rising for both sexes throughout the community. And this is actually the case so far as Hindus and Sikhs are concerned, and also for Muhammadan

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Population.

The age of marriage.

males. Whether it is equally true for Muhammadan girls is less certain On the one hand it is true that the father of a presentable girl is inclined to bide his time and look about for a really good match ; but, on the other hand, human nature has not altered much in twenty years, and it is certain that less than 467 out of every thousand young women between 15 and 20 years of age are sexually undeveloped : we shall have occasion to notice in more than one subsequent paragraph the tendency of love-lorn maidens to break loose, and there is a strong feeling amongst the Awan at any rate that girls are best mated while still manageable.

Religion.	Year.	PROPORTION PER 1,000 UNMARRIED.			
		Males.		Females.	
		10—14.	15—19.	10—14.	15—19.
Hindus ...	1891	918	655	682	103
	1911	959	794	799	148
Sikhs ...	1891	861	592	699	98
	1911	959	780	796	172
Musalmans	1891	981	808	902	378
	1911	981	865	911	467
All religions	1891	969	783	869	335
	1911	978	851	892	415

Moreover it is obvious that the shortage of wives must tend to lower the age of marriage. Hence it seems probable that much of the difference between the 378 grown-up virgins of 1891 and the 469 grown-up virgins of 1911 must be put down to differences of classification. We have seen that a young bride will generally declare her age as 20 ; and we have seen that in 1911 persons declared at 20 were included in the period aged 20—24, whereas in 1891 they were included in the period aged 15—19. Anyhow it is clear that at present about 4 per cent. of the boys and 20 per cent. of the girls marry before they are 15 years old in the Hindu and Sikh communities, while more than 80 per cent. of their young women, and less than 20 per cent. of their youths under 20 years are married : and among the Musulmán only 2 per cent. of boys and 9 per cent. of girls marry before they are 15, and about 14 per cent. of youths and may be 60 per cent. of the young women of under 20 are married. And these figures are decidedly creditable for a backward district.

Celibacy and polygamy.

Sooner or later practically everybody finds a spouse. Of men over 40 only 62 and of women over 40 only 11 per thousand remain unwed. The proportion among Hindus and Sikhs is somewhat higher than that among Muhammadans, but they include some celibate orders.

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Celibacy and polygamy.

It is curious to find in a district where the bulk of the population is allowed to have four wives, and where moreover there are many householders absent on military duty, that there are only 136,912 married women for 138,469 married men. The explanation is that a number of colonists had not in 1911 brought their wives to their new homes, and the Patháns from Afghánistán had only about 400 women for 1,900 men. As a matter of fact very few in this district marry more than one wife, except when it is expedient to make a levirate marriage. Apart from the question of expense, it is recognized that a plurality of wives is a source of constant trouble.

Widowhood.

Out of the wedded women, nearly 20 per cent. are widows (Hindus 27, Sikhs 22, Muhammadans 19·75) But of the Muhammadan widows only 19 per cent. are under 40, as against 29 and 28 per cent. respectively among Hindus and Sikhs Among the Muhammadans widow-remarriage is the rule, the brother of the deceased having a more or less recognized right to inherit a sonless widow. This right gives rise to a certain amount of trouble, as many widows much prefer to remain "*widows* indeed ", and give their favourite sons-in-law the advantage of cultivating their land, while others refuse to espouse openly either brother-in law or the man of their choice, but keep up a clandestine intimacy with the latter, while retaining their widow's title in the land.

Polyandry, mother-kin, and female infanticide are all unknown in this district.

Betrothal customs.

The age at which betrothal takes place depends chiefly on the means of the family; it is not unusual to betroth children at a very early age (two or three years), especially when the betrothed parties are first cousins or otherwise nearly related; but the most common age is among Mussalmans from ten to fifteen, and among Hindus from eight to twelve. It is thought a disgrace to allow a girl to grow up unmarried, and most girls are betrothed before the age of sixteen. Before the formal betrothal (*mangewa*) takes place, it is usual for the boy's father or some respected friend to go to the girl's father and get his consent. Then the boy's father or near relations go formally to the girl's house taking with them the family barber (*nai*) and bard (*mirási*) and the following articles, *viz.*, a suit of clothes for the girl (*chola*, *lungi* and *phulkari*), a pair of shoes, a plain silver ring (*chhalla*), value Re. 1-4-0, some coloured thread (*mauli*), 5 rupees in cash, 5 seers of *gur*, and 5 *paos* of *mehdi* which are given to the girl's father. A formal blessing (*dua khair*) is prayed for on

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Population.
Betrothal customs.

the betrothal and sometimes repeated three times. It is not usual to write out a contract of betrothal. Among some of the Musalmán tribes, a Brahman accompanies the bard and barber. Others do without any formal ceremony at all, except that of asking a blessing on the betrothal before the assembled relatives. Among Hindús the boy's father sends his family Brahman to the girl's father to fix a date for the betrothal, and on the date fixed the boy's relatives go to the girl's house where they are sometimes given by the girl's father a rupee and some sugar (*vaddhái*).

Marriage ceremonies.

The following description of a well-to-do Awán's marriage will give some idea of the ceremonies common on such occasions. When the cloth is cut for the trousseau (*palla*) the bridegroom's father sends the bride's father Rs. 5 and gives 3 seers of *gur* to the menials and 3 seers of flour and a seer of *gur* to the tailor. Each day thereafter the women sing songs at the bridegroom's house. A few days before the wedding, the bride's father receives the *kap*, *i.e.*, the bridegroom's female relatives with song and music take him Rs. 25, 3 maunds of wheat, 5 sheep, 10 seers of *ghi* and 15 seers of *gur* to help towards the wedding feast, or some smaller contribution if they are in humble circumstances. On the wedding day all the women of the family fetch a jar (*gharoli*) of water with song and music, and seating the bridegroom on a stool, cover him with a sheet and proceed to bathe him. They throw small coins to the value of a rupee or two into a vessel of milk and then pour the milk over his head, the barber and bard sharing the coins. The bridegroom's sister or niece seizes his sheet and refuses to let go till he gives her a present. On getting off his seat the bridegroom crushes with his right foot the earthenware lid of a jar (*chhúni*) and sits down on a blanket. An unmarried youth is appointed his "best man" (*sabáhlá*) and is given an iron weapon with which he protects the bridegroom. The friends then present their subscriptions towards the wedding (*nendar*) which are tested by a goldsmith and written down by a Hindu, both of them being rewarded with a rupee for their services. The wedding procession (*janj*) is then formed and proceeds from the bridegroom's house to the bride's where it is received by the women with songs of derision and abuse. A sweeper (*chúhra*) shuts the door against them and refuses to open till bribed with a rupee or two (*hura*). The wedding party then go inside and are feasted, the bridegroom first, and he is expected to give Rs. 5 or Rs. 10 to the bride's bard and barber who bring him the good things. Then the bride's female relatives come out and take the bridegroom and his party inside. There they play a game called *beri ghoṛi*, in which the

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women make fun of the bridegroom. The menials attached to the bride's family demand their perquisites from the bridegroom's father. Then the *nikáh* ceremony is performed according to the Muhammadan law, and this generally takes place in the early morning. The reader of the *nikáh* is given a rupee and the relatives regaled on sesamum and sugar. The bride's father then makes a display of the articles given by him in dower (*dáj*) to his daughter, and a bard-musician (*mirási*) describes them in a loud voice (*hokána*). The bridegroom, clad in fine clothes goes to pay his respects to his mother-in-law, and gives her Rs. 5, while she gives him a gold ring. The bride's clothes are formally changed, the studs (*bunde*) are taken out of her ears, and ear-rings (*váli*) are put in and the front plaits (*chond*) of her hair, which mark the virgin, are unplaited and her hair put up in the rolls which mark the married woman. This ceremony, called *kapre vattáune,* is the public sign of the marriage ceremony having been completed. The wedding procession, now including the bride, returns to the bridegroom's house, where she seizes hold of the door and will not go in till her mother-in-law gives her a cow or buffalo. A small child is then placed in her lap, and she gives it some sugar. She stays there for seven days (*satt hore*) and then returns to her parents' house, where she remains till she reaches the age of puberty, when again her husband goes in procession (*behda*) to fetch her home for good.

Among other Musalmán tribes the marriage customs are much the same, though of course the sums expended vary with the means of the parties. They are usally very extravagant and often a marriage plunges the bridegroom's father into hopeless debt. In 1895, an endeavour was made to reduce the expenditure on marriage ceremonies, and representatives of all classes bound themselves to keep within certain limits in the expenditure they would incur. Among the customs they agreed to discourage were those of feasting all and sundry, employing *mirásins* to sing and prostitutes to dance, having fireworks, throwing money broadcast over the bride's palanquin (*sot*), and distributing largesse to the poor (*vára*).

No great economy was effected, however, and on the whole the standard of extravagance tends to rise.

The marriage market.

There is no doubt that the expense of finding a suitable bride is increasing, and although the peasants hardly confess to the custom of paying "bride-price," they cannot deny that any man with a marriageable daughter will decline to dispose of her in marriage until he has received at least Rs. 120 in hard cash, or her equivalent in kind.

A large number of law suits, civil and criminal, practically turn on the question whether the mother or the uncle of a fatherless girl is entitled to the profits of mating her. It also seems highly probable that much of the trouble arising out of elopements by unmarried or newly-wed damsels arises out of the importance assigned by father and daughter respectively to full coffers and good looks. If the men of the district would combine to discountenance the payment of bride-price—a practice which they affect to contemn—the gain in domestic stability would be enormous.

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The marriage market.

Marriage and litigation.

Meanwhile women, sold into the absolute power of husbands chosen without reference to their tastes, seldom develop a very acute sense of connubial responsibility: in fact, a cynic might maintain that infidelity varied directly as opportunity. The results are only too apparent in the criminal and civil courts. Sometimes the provision of a substitute (*vanni*) will satisfy the husband or fiancé for loss of his bride, or the guardian for loss of his bride-price; but much more often the parties go to law. Perhaps the heroine will lead off with a petition to have her lawful guardian bound over to keep the peace, or imprisoned for having constrained her to marry against her will. The guardian, whether husband or father, will counter-attack with a criminal suit against the gallant for abduction, adultery, or kidnapping, and a civil suit for recovery of the heroine's jewelry. In each case, all and sundry on both sides are inculpated as abettors. If, as generally happens, the verdict is in favour of accused or defendant, the parties will proceed to take the law into their own hands, and the ensuing riots, murders, grievous hurts and what-not again engage the attention of the magistrate. If at any stage of the proceedings the gallant is imprisoned, the heroine will probably go back to her lawful husband or guardian, relying on her woman's wit to live down the scandal; but if she decides that the man chosen for her is altogether too distasteful, she will continue to make life a burden for him with suits for dower or maintenance, or by depriving him of his conjugal rights, so long as she can rely on the support of one of her own relations, or those of her lover. In any case she has little to lose, and has the satisfaction of knowing that her escapades have endangered the liberty of several men, and wasted the time of numerous officials, without risk to herself. And it must be admitted that there is a certain wild justice in this queer state of affairs; for it is the fault of the men that she is treated as a cow, and the misfortune of Government that the traffic in brides can be neither stopped nor legalized: if it could be stopped, a woman could be dealt with as a responsible human being, and imprisoned; and if it were lega-

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lized, she could be treated as an irresponsible, and occasionally errant animal, and impounded.

A detailed account of the tribal custom in this district will be found in a separate volume.*

Its general character is as follows :—

Among Hindús a man may not marry a woman of his own clan, so that he cannot marry an agnate of his own, and as conversely a woman must marry a non-agnate of her father, and the children invariably belong to the tribe and clan of their father, not of their mother (just as in Europe a child takes its father's surname and not its mother's), it follows that any relation through a female, of a man, whether through his mother, sister or daughter must belong to a different group of agnates, *i.e.,* to a different clan. Among the Musalmán tribes of the east of the Province, the same rule prevails in practice, although in theory a marriage with an agnate's daughter would be legal, so that in those tribes also all relations through females of a man are necessarily his non-agnates. Among all the Musalmán tribes of Shahpur however, Muhammadan Law has had such a strong effect as regards the question of intermarriages of relations that it has entirely abrogated the rule forbidding intermarriage of agnates, and such intermarriages are everywhere very common; indeed it is thought preferable that a man should marry his cousin, whether she be related to him on his father's or his mother's side, rather than that he should seek a wife outside the family, the reason for this preference probably being that a marriage within the family is less expensive and difficult to arrange than a marriage with an outsider, and tends to keep the property within the group of relations. The effect of this breaking down of the old rule has been that, as a man's sister's son or daughter's son may be also his agnatic relation, for instance if his sister have married his father's brother's son, or his daughter have married his brother's son, alienation of the property to a sister's son or daughter's son does not necessarily mean alienation to a non-agnate, and the power of the agnates to forbid such an alienation,—based as it is on the old rule which still holds among Hindu and other exogamous tribes that "the land must not leave the *got*, or group of near agnates"—has been very much weakened, and alienations to such relations through females are much more common than they are in the east of the Province. Indeed the power of the agnates to forbid alienation having been thus weakened, it is among some tribes, such as the Awáns, no longer strong enough to prevent alienation to a sister's son or daughter's son, though he be not himself an agnate, and can hardly prevent alienation even to a non-relative by a sonless man.

Betrothal and marriage.

Generally speaking, marriage is a contract, not between the persons to be married, but between their families, and is arranged for them by their agnates with the consent of the mothers, usually while the parties themselves are too young to give an intelligent consent. When the contract has been privately agreed on between the families, the betrothal is completed with elaborate ceremonies of the nature of a sale, in which money plays a principal part. A girl is looked upon as a valuable piece of property, and betrothal is a contract by which the girl's family bind themselves, often for a money

* The Riwáj-i-ám of the Shahpur District, compiled by Mr. Wilson. It has been decided by the Financial Commissioner that this is sufficiently up to date for all practical purposes.

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Betrothal and marriage.

consideration, or in exchange for another betrothal, to transfer the ownership of the girl to the boy's family on her reaching a marriageable age. If either of the parties die before the marriage actually takes place, the contract is at an end, and the boy's family are not, as in Sirsa, considered entitled to claim that the girl should be married to another boy of their family, if her original betrothed should die. The ceremony of marriage actually transfers the ownership of the girl from her agnates to those of the boy. It is accompanied by many elaborate ceremonies, the binding form being among Musalmáns the *nikáh* made according to the Muhammadan Law, and among Hindús, the circumambulation of the sacred fire under the auspices of the family Brahmans. After the marriage the girl remains in her father's house, and actual possession of her is not delivered until she reaches puberty.

Effects of betrothal.

While such is the usual course of betrothal and marriage, it is much more common in Shahpur than it is in the east of the Province, for betrothal and marriage to be deferred until the parties are grown up, and unmarried women of full age are much more numerous in Shahpur than they are further east. One consequence of this is that the consent of the parties themselves becomes much more important, and it is not uncommon for a grown-up girl to refuse to marry the man selected for her by her parents and guardians and to elope with the man of her choice. Such conduct is bitterly resented, not only by the family of the man she has rejected, but by her own family, and often leads to quarrels and litigation, and although the Musalmáns cannot deny that such a marriage is valid by Muhammadan Law, many of them would welcome legislation to make the marriage of a woman without the consent of her parents or guardians, especially to a man of an inferior tribe, void altogether. There is also a general feeling that while a girl's family, who incur no expenses in making the betrothal, have no claim to compensation if the betrothal be broken off, the boy's family, who have to go to some expense to carry out the betrothal, have a claim, not only to a return of their expenses, but to damages for the breach of contract; and that the claim for compensation should lie, not only against the girl's family, but against the family of the man she has married.

Number of wives.

Although a Musalmán may marry four wives, all alive at one time and a Hindu as many as he pleases, it is not very usual for a man to have more than one wife at a time; and where he does marry a second wife during the lifetime of the first, it is generally because the first has not borne him a son, or because of some serious quarrel with her; or when he marries the widow of a deceased brother.

Divorce and dower.

Divorce is very rare, and although a dower is always mentioned at a marriage of Musalmáns, it is rarely paid, it being usual for a wife to relinquish her right to dower to her husband on his death-bed.

Inheritance: sons.

Ordinarily the whole family remains living in common until the father's death, and his wife, children and sons' wives and children are under his control, as well as the whole of the joint property. As the daughters grow up, they are married into other families, and leave their father's control for that of their husbands' fathers. As the sons grow up, wives are found for them who join the father's family and come under his control. Often the father gives a married son a separate house with a share of the moveables and

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Inheritance: sons.

sometimes a separate plot of land; but this is a matter for the father's own decision, and such a partition, unless approximately fair and intended to be final, is liable to be cancelled on the father's death. When that occurs, the whole of the father's estate devolves on the sons, who sometimes continue to live as a joint family, but more often make a division among them of the moveable property and dwelling-houses, and either then or afterwards, of the land also. All the sons take equal shares without regard to age and without regard to the number of tribe of the mothers. The custom of dividing the property among the sons according to the number of mothers, which is not uncommon in the east of the Province, is practically unknown in Shahpur. If one of the sons have died before his father, his sons or widow take his share of the estate by representation. In the presence of sons or son's sons, daughters get no share of the property; they are maintained by their brothers until suitably married into another family.

Inheritance: widows.

Where there are sons, their widowed mother gets no share of the estate but is maintained by her sons; and if they divide the joint estate among themselves, they usually set apart a portion for their mother's maintenance during her lifetime. Where there are no sons, or son's sons, the whole of the estate devolves on the widow, two or more sonless widows taking equal shares. The widow holds the whole estate till her death or re-marriage, and has power to make all ordinary arrangements for its management and to enjoy the whole of its produce. Generally she can do as she pleases with the moveable property, but must not alienate the immoveable property without the consent of the husband's agnates. If, however, the agnates do not make proper arrangements for necessary expenses, the widow can alienate so much of the husband's immoveable property as is absolutely necessary, even without their consent. The widow of an agnate who has died without sons or son's sons, is in all cases entitled thus to succeed to her husband's share, even although, owing to his father being still alive, it had not yet come into his separate possession, or although he was living associated with his brothers (except among the Hindús where in that case the widow is entitled to maintenance only). When a widow in possession of her deceased husband's estate dies or re-marries, even though she marry her deceased husband's brother, the whole of her former husband's estate, moveable and immoveable, reverts to her husband's agnates, who take it in the shares in which they would have taken it had he died without leaving a widow. A widow having minor sons has much the same power over the estate as has a sonless widow until her sons are old enough to manage it for themselves; but if she re-marry, she loses not only her control over her former husband's estate, but also the guardianship of his children. If she does take them with her to her new home they cannot succeed to any share in the estate of their step-father; they still belong to the family of their own father and (if sons) are entitled to succeed to their father's estate.

Inheritance: daughters and their heirs.

When a man dies without agnatic descendants or widow, the married daughters or their sons in no case succeed to a share in the estate; but it is the almost universal custom in this district (unlike Gurgaon and Sirsa) that the unmarried daughters succeed in equal shares to the whole of their father's property, moveable and immoveable, till their death or marriage, when it reverts to the agnatic heirs, the powers of the daughters over the estate being similar to those of the widow. Failing unmarried daughters the father of the deceased takes the estate; if the father be also dead it goes to the brothers

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Inheritance: daughters and other heirs.

in equal shares. Ordinarily all the brothers, whether of the same mother or not, succeed equally, but if the property had been divided there is a tendency among Musalmáns for the full brothers to exclude the half-brothers, and among Hindús an associated brother excludes an unassociated brother. If one of the brothers has died, his sons or sonless widow take his share of estate by representation. If there be no agnatic descendants of the deceased's father, his mother takes a life-interest in the estate; failing the mother, or on her death, the unmarried sisters take the whole estate till their death or marriage, then the father's brothers and their agnatic descendants take it in shares proportioned to the number of brothers; and so on, the nearest agnates and their agnatic descendants taking the estate in preference to the more remote. Where there are two of a class, they share equally, and the right of representation prevails to the fullest extent. No heir excludes the agnatic descendant or the sonless widow of another heir of the same class. Only agnates and the sonless widows of agnates, and (till their death or marriage) the daughters of agnates, inherit. A married daughter, or sister, or a daughter's or sister's son, can in no case inherit. When the estate goes to a female, she has a life-interest only, and on her death or marriage it reverts to the agnates.

Istrídhan.

There is no general custom of considering part of the joint estate as being the special property of the women. Whatever is given with, or to, a woman becomes merged in the joint estate under the control of the agnates, although they should not alienate any such property without the woman's consent unless in case of necessity.

Wills.

Wills are almost entirely unknown*. If a proprietor wishes to interfere with the devolution of his property according to the ordinary rules of inheritance, he must carry out his intentions in his lifetime. An expression of his wishes as to the disposition of his property, if not carried out in his lifetime, has no force after his death.

Adoption.

Among the Hindús a man having no son or son's son may adopt any near relation he pleases, even a daughter's son or sister's son, but not a distant relation or stranger, and the person adopted succeeds to the whole of his estate, as if he were a natural son, to the exclusion of the other natural heirs. Among Musalmáns, adoption is practically unknown except among the Awáns, where a man having no son or son's son may adopt any Awán he pleases and make him heir to his whole estate; but the adoption must be made by written deed, and is more of the nature of gift than adoption.

Gift.

The power of an owner to alienate by gift his moveable property is practically unrestricted, unless when he has sons or sons' sons, in which case he ought not to give away an unreasonably large portion of the moveables so as to injure the sons. A proprietor having sons or sons' sons has no power to alienate by gift without their consent any portion of the immoveable property, except that he can give a small portion of it in dowry to a daughter, or for charitable or religious purposes; and he cannot give a large share of the immoveable property to one son than to another. But a proprietor having no sons or sons' sons is, among the Awáns, almost absolute owner of his whole estate, and can gift it to any relative without the consent of the

*They are, however, now produced occasionally, but no recognised custom in respect of them can be said to have emerged, other than that given.—M. LEIGH.

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Influence of the Muhammadan Law.

others; among other tribes he cannot make a gift of immoveable property to one relative without the consent of the agnate heirs, except sometimes a small portion to a daughter or daughter's son, or son-in-law.

Briefly, it may be said that the influence of the Muhammadan law on the custom of Musalmán tribes is confined to questions relating to marriage and divorce, and does not extend to questions relating to property. Among all Musalmán tribes a marriage must take place by *nikáh,* and any marriage which is legal according to Muhammadan law is allowed to be valid, and although the rules regarding dower and divorce are rarely acted on, they are admitted to be binding on all Musalmáns. But the elaborate rules of the Muhammadan Law regarding inheritance, wills and legacies are never acted on, the custom in such matters being founded on the entirely different basis of agnatic relationship. For instance a daughter gets no share in the presence of sons, a sister no share in the presence of brothers, a widow either gets the whole estate or none at all, and the right of representation prevails to the fullest extent. To introduce the elaborate rules of Muhammadan law in those matters would revolutionize the tribal custom of all the Shahpur tribes and give rise to endless injustice and discontent. The only effect of Muhammadan law on questions relating to property has been the indirect influence already mentioned, *viz.,* that by breaking down the rule requiring a woman to be married to a non-agnate, it has weakened the power of the agnates to forbid an alienation of immoveable property to a relation through a female.

Language.

According to Table No. X of the Punjab Census Report, the linguistic distribution of the district is as follows:—

Total population 687,366—

Asiatic Languages ...	687,178	European Languages ...	188
I.—Non Indian ...	49	I.—English ...	187
(*a*) Persian (49)			
II.—Indian ...	687,129	II.—German ...	1

Detail of 687,129 *Indian-Vernacular-speaking persons.*

Punjábi vernacular ...		687,011	Other vernaculars ...	118
(*a*) Punjábi	Standard ... 658,439 Dogri ... 273	658,712	(*a*) Kashmíri	78
(*b*) Lahnda		20,208	(*b*) Sindhi	21
(*c*) Western Hindi	Hindustáni ... 1,784 Urdu ... 1,382 Other Hindi ... 1,466	4,632	(*c*) Gujráti	6
			(*d*) Bengáli	3
			(*e*) Others	10
(*d*) Pashtu		2,914		
(*e*) Rájasthání		445		
(*f*) Western Pahári... ...		99		
(*g*) Baloch		1		

As between standard Punjábi and Lahnda these figures are practically meaningless According to the value given to the term Lahnda, both by Sir George Grierson and by Pandit Hari Kishan

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Kaul, the whole district (apart from its immigrants), speaks some form of that tongue. In the *cis*-Jhelum tract, the dialect is called Doábi by Sir George Grierson, and the Pandit breaks it up into Bhirochi, Sháhpuri, and Jangli. Across the Jhelum are the Thali and the Awánkari. Of these variations, Awánkári falls into the Pandit's north-western group, the Thali into the South-Western, and the others into the South-Eastern, and the further one goes from the centre of the district, the greater will be found the influence of Pothwári, Multani, or standard Punjábi according as one goes north, south-west, or south-east. All these groups have the future in *s*, the passive in *i*, make frequent use of pronominal suffixes, and have such forms as *assi* (we), *itthe* (here), which are characteristic of Punjábi generally; but while the dialects of the plains have the genitive postposition in *da*, the dative in *nu* and the present participle ending in *da*, the corresponding terminations in the Salt Range dialect are *na*, *ah*, and *na*, and there are many other marked differences which cannot be detailed here. The dialects throughout the district, however, shade off imperceptibly into one another, and every resident of the district is, so far as dialect goes, easily intelligible to every other. Although the district boundary approaches near the Indus and there are a few villages of Patháns in the north-west corner, Pashtu is nowhere the mother tongue of the people: those who speak it are all immigrants. The best guide to the language is Sir James Wilson's Manual,* but Bomford's Grammar, Juke's Dictionary, and O'Brien's Multáni Glossary will also be found helpful.

It is unfortunate that the figures give no sort of indication how far the speech of the Central Punjab has been introduced by colonists, and it is to be hoped that at the next census some clear distinction will be made between (*e.g.*) the dialects of the Siálkoti villages and those of Awán horse-breeders. The speakers of Hindi include officials and other well-educated persons, especially members of the learned professions, as well as grooms, gardeners and domestic servants. The speakers of Rájasthání are labourers from the south. The English language has 187 exponents now as against 53 in 1891 and 27 in 1881: the growth of Sargodha is mainly responsible. It may be confidently predicted that not even 1 individual will confess to German in 1921. Persian is the only language spoken by more women than men.

* "Grammar and Dictionary of Western Punjabi as spoken in the Shahpur District, with proverbs, sayings, and verses"—J. Wilson, I.C.S., 1898 : Punjab Government Press : Rs. 2-8-0.

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Population.

General distribution of landowning tribes.

Table No. 15 gives the figures for the principal castes and tribes of the district. As regards the landowning tribes statements showing the number of estates and the areas owned by each will be found in the assessment reports. Their general distribution may be broadly described as follows:—In the Chenab valley the land is chiefly owned by the Ránjhás, alongside whom are found a few villages of Patháns, Riháns, and Nissuwanas. The Gondals are the dominant tribe of the Bhera Bár, and own also a number of estates on either side of it in the valleys of the Chenáb and Jhelum. West of them in the Jhelum valley come the Bhattís and the Khokhars, the latter of whom occupy much of the land on both sides of the river from Bhera down to the Jhang border, interspersed with cognate tribes, such as the Mekans and Jhammats and with other tribes such as the Biloches and Sayads. In the Thal country the dominant tribe are the Tiwánas, north of whom along the Salt Range and within its valleys almost the whole area is owned by the Awáns, a very compact tribe. The colonists are roughly arranged with the Siálkotís to the west, the Gujrátís and men from Jhelum to the east, and those from Gujránwála in the middle; the colonists from other parts of Shahpur are scattered about among all circles.

Caste.

Among the Hindús, ideas of caste, though they do exist to a certain extent, are not nearly so prominent and have not nearly so great an influence on their daily life as they have among the Hindús of the east of the Province, while among the Musalmáns, although strong social feelings and prejudices exist, they are not of a religious character, and have not to do with semi-religious ideas of purity and impurity, all Musalmáns being considered equal before God; so that it may be said that caste, as a religious institution, does not exist among the Musalmáns. Nor are ideas as to difference of caste from a social point of view so powerful in the Shahpur District as they are among the Musalmáns of the east of the Province, who have been prevented from forgetting their own original caste prejudices by the proximity of larger bodies of Hindus of all castes, in many cases belonging to tribes whose blood-relation with themselves is still remembered.

Tribe.

The population generally is, however, clearly subdivided into tribes (*ḳaum* or *zát*) having a common name and generally supposed to be descended from a traditional common ancestor by agnatic descent, *i.e.*, through males only. Some of these tribes are very homogeneous, as, for instance, the Awáns, who number 65,928, or 9·5 per cent. of the total population. Others

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Tribe.

again, such as the Khokhars, who are returned as numbering 21,858 or 3 per cent. of the population, are rather a loose congeries of clans than a compact tribe. The tribal division is of some importance in questions of marriage and alienation of property, for although among Musalmáns any marriage which is legal according to Muhammadan law is held valid, it is customary to marry only within the tribe or with certain other tribes who are considered to be closely allied, and alienation to a non-agnate is much more readily allowed if he be a member of the tribe than if he belong to another tribe.

Clan.

Almost every tribe is again sub-divided into clans (*muhi*) or smaller groups of agnates, distinctly recognized as descended through males only from a somewhat remote common ancestor, and usually bearing a common name, exactly similar to the clan-name of a Scottish clan and used very much in the same way. For instance, just as Donald, the son of Duncan, of the clan Campbell, would, in a village in which there were many Campbells, be generally known as "Donald, the son of Duncan," but when he went elsewhere, would be described as "Donald Campbell"; so in Shahpur, Jahâná, the son of Bakhshú of the Tátrí clan is among Tútrís known as "Jahâná Bakhshú dá," but to other people as "Jahâná Tátrí." The clan is almost more important than the tribe, as the mutual agnatic relationship of men of the same clan is more fully recognized.

Family.

Within the clan comes a still narrower group of agnates which may be called the family (*kabíla*), also consisting of agnates descended from a common male ancestor, not very remote, and much resembling the family group among European nations, except that the agnatic family group is much more clearly marked off from the relations through females only in the ideas of a Shahpur peasant than is the case in Europe; for instance, a sister's son, though recognized as a near relation, holds a very different position from a brother's son, who is one of the nearest agnates. Indeed all through the system of relationship, relations through females are described by entirely different names from relations through males, and are classed entirely apart from them. The basis of the whole family and tribal system is agnatic relationship, the agnatic family having developed in the course of time into the agnatic clan, and that again into what is, in theory at least, the agnatic tribe.

Tribes of most importance in the district.

The castes and tribes of most importance in point of numbers are shown in the following table, in which they are arranged partly according to occupation and partly according to the

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place they occupy in the social scale according to the general estimation of the people:—

Tribes of most importance in the district.

Tribe.	Prevalent religion.	Prevalent occupation.	Total number.	Percentage of total population.
A.—Dominant Landowning Tribes.				
Biloch ...	Musalmán ...	Agriculture	13,661	2
Patbán ...	Ditto ...	Ditto	6,747	1
Rájpút ...	Ditto ...	Ditto	37,243	5
Jat ...	Musalmán & Sikh	Ditto	164,355	24
Awán ...	Musalmán ...	Ditto	67,147	9·5
Khokar ...	Ditto ...	Ditto	21,858	3
Aráín ...	Ditto ...	Market gardening	12,504	2
B.—Priestly Classes.				
Brahman ...	Hindu ...	Receipt of offerings ...	6,316	1
Sayad ...	Musalmán ...	Receipt of offerings and Agriculture.	13,156	2
Ulama ...	Ditto ...	Mosque service and teaching ...	1,093	...
Sheikh ...	Ditto ...	Miscellaneous	3,489	·5
Qureshi ...	Ditto ...	Ditto	5,028	1
C.—Mercantile Classes.				
Arora ...	Hindu and Sikh	Money-lending and shopkeeping	47,053	7
Khatri ...	Ditto ...	Ditto ditto ...	18,519	3
Khoja ...	Musalmán ...	Trade	3,856	·5
D.—Artisans and Menials.				
Sunár ...	Hindu and Musalmán	Silversmiths and money-lenders ...	5,707	1
Tarkhán ...	Musalmán ...	Carpenters	17,089	2·5
Lohár ...	Ditto ...	Blacksmiths	8,443	1
Kumhár ...	Ditto ...	Potters	16,888	2·5
Juláhá ...	Ditto ...	Weavers	26,300	4
Nái ...	Ditto ...	Barbers	10,886	1·5
Teli ...	Ditto	Oilmakers	3,323	·5
Máchhi ...	Ditto ...	Bakers	16,141	2
Qassáb ...	Ditto ...	Butchers	8,254	1
Dhobi ...	Ditto ...	Washermen	8,301	1
Mochi and Chamár	Musalmán and Hindu.	Leather workers	24,478	3·5
Mirási ...	Musalmán ...	Bard-musicians	13,035	2
Musalli ...	Ditto ...	Menial labourers	5[illegible],273	8
Chúhra ...	Hindu ...	Ditto	5,474	1

Notified agricultural tribes.

The tribes notified as agricultural under the Alienation of Land Act are Ahir, Aráín, Awán, Biloch, Gujjar, Jat, Kamboh, Khokhar, Maliár, Mughal, Pathán, Qureshi, Rájpút, and Sayad. There is a list in the Deputy Commissioner's office showing what sub tribes are subsumed under these heads; the supplement to Table No. 15 shows the most important sub-divisions of Jats and Rájpúts.

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Population.

Dominant land-owning tribes— The Biloch.

The Biloch, who form more than two per cent. of the total population, have increased from 10,583 to 13,661, or by 29 per cent. In this district they are a fairly distinct tribe, and the term is seldom applied to camelmen who are not true Biloch, except perhaps in the Bhera Tahsíl, where the tribe owns little land. In this district they are found chiefly in the Shahpur (4,536) and Khusháb (4,487) Tahsíls. In Shahpur and Sargodha they own 21 estates with an area of 39,155 acres and in Khusháb 15 estates with an area of 65,669 acres. They are found chiefly (1) round Khusháb where before Ranjít Singh's time they held independent sway, and again (2) on both sides of the Jhelum about Sáhíwál which was the seat of another ruling family of this tribe. Its leaders are now Sardár Bahádur Khán of Khusháb and Sardár Mohammad Chirágh Khán* of Sáhíwál, both *Divisional Darbáries*. The Biloches are only fair agriculturists, and some of them are extravagant. They furnish many good cavalry recruits, especially from the village of Jamali in the Thal. The principal clans are the Lagbári, Lashári and Rind, but these account for a very small proportion of the whole. Only one man in the district is returned as speaking Bilochi.

The Patháns.

The Patháns number 6,747 against 3,197 at last settlement. Of these the 2,914 Pashtu-speakers were probably coolies and merchants only temporarily resident in the district. There are one or two Pathán villages in the Bhera (853) and Shahpur (1,746) Tahsíls, but the Patháns are chiefly found in the north-west corner of the Khusháb Tahsíl (2,200) in which they own 23,312 acres. Here we are just on the border of the territory occupied by the cis-Indus Patháns of the Bannu District. They are fairly good agriculturists, but somewhat extravagant and hot-tempered. This tribe owns altogether some 58,000 acres in the district.

The Rájpúts and Jats.

The remaining land-owning tribes may almost all be treated of together, as they are of similar character and apparently of similar origin, whatever their traditions to the contrary. A Shahpur peasant when asked his tribe will generally give his local clan-name, such as Jháwari, Mekan, Midh, Kalas. These names are very similar to the clan-names of the Scottish Highlands or to ordinary English surnames, and indeed are in the district sometimes used in much the same way (a usage not common in the east of the Province); for instance, a witness telling a story will say Jalál Mekan did this, or Nabbu Tárar did that, just as one might speak of Neil Maclean or Peter Jackson. When a

*Died May 1916.

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Population.

Dominant land-owning tribes—The Rájpúts and Jats.

man bears the same clan-name as another, it means that they are related to each other through agnates, for only agnates take the clan-name, a daughter's son taking the clan-name of his father not of his mother. This again is the same as in England where (within limits) all the Macleans in a community would be agnates of each other, and all the Jacksons of each other. When a peasant is further asked what great tribe he belongs to, he will, if an ignorant man, be unable to tell ; if a man of ordinary intelligence, he will probably say, "We join with the Bhattis" or Khokhars or some other well-known tribe, or he may say "We are originally Chohán Rájpúts." If asked, whether he is a Rájpút or Jat, he will, unless an unusually humble-minded man, say he is a Rájpút. But the distinction is by no means certain, and there are many tribes,* some members of which would call themselves Jats, and some Rájpúts, or which some of their neighbours would admit to be Rájpúts while others would call them Jats. There are a few tribes which, whether from their higher pretensions or from their having occupied a more important position than their fellows, are generally admitted in the neighbourhood to be of Rájpút descent, while others do not even claim this honour for themselves. The fact is that the distinction is one of rank, not of descent, and that in this district Rájpút simply means an agriculturist of high rank and Jat means an ordinary agriculturist with no such pretensions. The chief practical distinction between them is that the so-called Rájpút is more particular about the tribes and families with which he will exchange daughters in marriage than the Jat is.

There are other tribes again which call themselves neither Jat nor Rájpút, and yet evidently belong to the same great race as the others. For instance the Khokhars, who have here been reckoned separately in this census, sometimes claim to be descended from Qutb Shah of Ghazni, and so to be of Arab descent, but many of them return themselves as Rájpút or Jat,† and there can be no doubt that they are of the same race as their neighbours. The Awáns again make a still stronger claim to Arab origin, but they too are probably of the same race as the Jats. Another distinction arises in this way. An ordinary Jat attains some fame as a holy man, and hands the saintly character down to his descendants, who are called Pírs or Miánas. After a generation or

*e.g. Bhattís, Mekans, Joyás ; in some cases, tribes which were recorded as Rájpúts in 1901 became Jats in 1911, e.g., Ránjhas, Dhudhis and Gondals. In 1911 there were only 87,243 Rájpúts in the district, as against 73,177 in 1901, 75,331 in 1891, and 82,290 in 1881. This clearly shows that the local aristocracy are tending to become more exclusive.

†In the 1911 Census, apart from the 21,858 persons recorded as Khokhars, there were 5,288 Khokhar Jats, and 1,772 Khokhar Rájpúts.

Dominant land-owning tribes—The Rájpúts and Jats.

two they claim an Arab origin, and as the fancy takes them, call themselves either Sayad or Qureshi ; soon their true origin is forgotten and the Arab origin is believed by themselves and generally admitted by their neighbours.

Sir James Wilson was of opinion that, with few exceptions, all the land-owning Muslamán tribes of this district, whether calling themselves Jat, Rájpút, Khokhar, Awán, Sayad, or Qureshi are of one Aryan race and were formerly Hindús. Pandit Hari Kishan Kaul, who is intimately acquainted with the adjoining tract to the west, is strongly of the same opinion (*vide* page 447 of the 1911 Census Report). Their common dialect, common customs and similarity of physique and character are strong evidence of a community of descent and race. There is, however, great practical importance in recognising the difference of tribe. Men of one clan-name look upon each other as agnates and have a fellow-feeling with each other which affects their daily intercourse. Clans which on both sides admit a common origin are more closely connected with each other than with other clans by the vague feeling of relationship, and are often more ready to intermarry with each other than with other unrelated clans. Members of a tribe which is generally admitted to be of Rájpút origin are more likely to receive respect from their neighbours than a mere Jat. And a man who is generally believed to be a Sayad or Qureshi is sure of some reverence from all true Musalmáns.

The most convenient way of describing the main Musalmán land-owning tribes of indigenous origin will be to take them in order of locality beginning at the Chenáb and ending at the Salt Range :—

Bhera	...	6,008
Shahpur	...	314
Khusháb	...	209
Sargodha	...	1,005
Total district	...	7,536

The Ránjhás.

In that part of the Chenáb river valley which is included in this district the principal tribe are the Ránjhás who own there, in 54 estates, more than 68,000 acres. Their villages are very compact and they are only found in any numbers in the immediately adjoining portion of Gujrát District up the river, or in Gujránwála across the river. Their numbers in this district have only increased since last census from 7,065 to 7,536, or by 2 per cent. They are a tribe of doubtful rank but are now

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Dominant land-owning tribes — The Chadhars.

classed as Jats. They are on the whole a peaceable and well disposed section of the population, subsisting chiefly by agriculture, which they practise well and carefully.

Bhera	2,194
Shahpur	893
Khusháb	211
Sargodha	703
Total district ...	4,001

South of the Ránjhás in the Chenáb valley come the Chadhars, another very similar tribe, also of doubtful rank. Their headquarters are in the Jhang District down the river. In this district they own about 8,000 acres towards the Chenáb valley, and elsewhere are chiefly tenants.

The Siprás.

Bhera	922
Shahpur	338
Khusháb	72
Sargodha	442
Total district ...	1,774

In the same neighbourhood are three estates owned by the Siprás, another Jhang tribe, who own about 7,000 acres in the Chenáb valley and are chiefly tenants elsewhere in the district.

A small area on the Jhang border is also held by Riháns, Lális and Nissuwánás, tribes chiefly found in Jhang.

The Gondals.

Bhera	12,962
Shahpur	1,459
Khusháb	5,224
Sargodha	8,978
Total district ...	28,623

The chief tribe of the Bhera Bár are the Gondals, who occupy a fairly respectable place in the social scale and call themselves Rájpúts, though now classed officially as Jats. They stretch across the whole Doab in the adjoining portions of the Gujrát and Shahpur Districts, from the Chenáb valley to the Jhelum river and across it into the Jhelum District. In Bhera they own nearly 74,000 acres in 44 villages. Their numbers are returned as 33 per cent. above last settlement. Physically they are a fine race, tall, strong and well made, and until recently they

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Dominant land-owning tribes— The Gondals.

were a pastoral people subsisting almost entirely on the produce of their large herds of cattle. Since the introduction of British rule, however, they have gradually been taking more and more to agriculture to which they now devote a considerable amount of attention and skill. They are still greatly addicted to cattle theft, which was formerly considered an honourable pursuit, and but few of them have taken service in the army for which they seem well fitted.

The Harrals, Laks and Nagyánis.

	Harrals.	*Laks.*
Bhera	1,047	746
Shahpur	404	1,419
Khusháb	16	71
Sargodha	643	920
Total district ...	2,110	3,156

In the *Bár*, south-west of the Gondals, come the similar cattle-owning, cattle-stealing tribes of Harral and Lak, the former of whom own over 11,000 acres in the Bhera Bár and the latter nearly 20,000 acres in Bhera and Sargodha, and then the Nagyânas, a holy clan, small in numbers but owning some 15,000 acres in the Shahpur riverain and Sargodha Bár.

The Bhattís.

	Jats.	*Rájpúts.*
Bhera	735	1,890
Shahpur	1,471	1,299
Khusháb	264	1,641
Sargodha	1,741	1,597
Total district ...	4,211	6,427

Turning now to the valley of the Jhelum we find, west of the Gondals all along the river from Miáni to Shahpur, the agricultural population consisting of a number of comparatively small and unimportant clans, some of which class themselves as Bhattís and some as Khokhars. Of these two terms the latter has more significance here and does apparently mean a close connection between the clans calling themselves by that name, but the term Bhatti is very loosely used, and signifies no real connection between different clans. If a Jat in the Jhelum riverain after having mentioned his clan-name is pressed to give a wider tribal name, he will probably, unless he is a Khokhar, say he is a Bhatti, just as a Gondal in the Bár will say he is a Chauhán, and in each case with equal truth. These so called

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Bhattís also own a considerable area south of Shahpur, and altogether in the Shahpur and Sargodha Tahsíls Bhattís own 27 estates and about 27,000 acres. They are fairly industrious peasants but greatly wanting in thrift and deeply in debt as a rule.

The Khokhars.

	Khokhar.	*Khokhar Jat.*	*Khokhar Rájpút.*
Bhera	2,530	2,132	1,271
Shahpur	10,595	1,219	17
Khusháb	6,476	609	1
Sargodha	2,257	1,328	483
Total district ...	21,858	5,288	1,772

On both sides of the Jhelum, from about Miáni down to the Jhang border and on into Jhang, there are many villages owned by clans calling themselves Khokhar, either as their only designation or as a secondary tribal name in addition to their local clan-name. Although used somewhat vaguely by some clans, it has a more definite meaning than Bhatti, and the Khokhars are here a fairly compact tribe of the ordinary Punjabi Musalmán type, and evidently of indigenous origin, notwithstanding the claim some of them make to be descended from Qutab Shah of Arab blood. The Khokhars own 10 villages and over 50,000 acres in the Bhera Tahsíl, but are most numerous in the south of the Shahpur Tahsíl near the Jhang border. In that neighbourhood they and cognate tribes claiming Khokhar descent own 68 estates and more than 50,000 acres, while in Khusháb they own in 31 villages, and have nearly 100,000 acres. So that the Khokhars may be said to be the principal land-owning tribe of the Shahpur Tahsíl as the Gondals are in Bhera. At last settlement 24,040 persons were returned as Khokhars : the number now returned is 28,918, an increase of 20 per cent., but this includes the Khokhar Jats and Khokhar Rájpúts.

The Mekans and Jhammats.

	MEKANS.		JHAMMATS.
	Jats.	*Rájpúts.*	
Bhera	2,751	22	300
Shahpur	1,407	1,554	2,013
Khusháb	822	8	329
Sargodha	455	...	1
Total district ...	5,435	1,584	2,643

Among the other Punjábi Musalmán land-owning clans of the Jhelum valley are the indigenous clan of Mekans, a

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Dominant land-owning tribes—The Mekans and Jhammats.

compact clan, found chiefly immediately to the east and south of Shahpur. In the Shahpur and Sargodha Tahsíls they own in 39 estates more than 50,000 acres, and so come little behind the Khokhars in importance as landowners. They were formerly noted for turbulence, but have now settled down more or less quietly to agriculture and are fairly prosperous. Some of the leading members of this tribe, who have their head-quarters in Kot Bhai Khan and Kot Pahlwán, are very well-to-do, and have a considerable reputation as horse-breeders. The rank and file have still a bad name for cattle-lifting. Related to them are the Jhammats, another compact local clan, returned as Rájpúts, who own 12 villages and 17,500 acres immediately south of Shahpur. They are bad managers and many of them in debt. They have alienated nearly 10,000 acres since settlement.

The Kaleárs.

East of *Sáhíwál*, and in the neighbourhood of Sargodha, are the Kaleárs :—

	Jats.	*Rájpúts.*
Bhera	198	...
Shahpur	356	360
Khusháb	133	13
Sargodha	28	1,804
Total district ...	715	2,177

They are a tribe whose influence is quite out of proportion to its numbers, and dates from the time when the Kirána Bár was dedicated to the camel and the cow. One Allahyár, Kaleár, made a great name for himself by organising the business of cattle theft in such a way as to win respect both from the thieves (for whom he provided a clearing-house) and also from the administration (which he was prudent enough to assist considerably). The ethnology of the clan is even more doubtful than usual ; in the 1901 census and in the revenue records of Shahpur Tahsíl, they are classed with the Biloches, probably on account of their interest in camels ; but in the 1911 census and the revenue records of Sargodha Tahsíl, they hesitate between Jat and Rájpút ; so that it appears eminently probable that they too are of the same stock as the tribes already mentioned. The Kaleárs own about 15,000 acres of land in Shahpur and Sargodha Tahsíls.

The Joyas.

In the valley of the Jhelum on the Khusháb side, the principal land-owning tribes are the Biloch, Khokhar and Bhatti

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Population.

Daminant lond-owning tribes—The Mekans and Jnammats.

already mentioned. The only other tribe of any importance are the Joyas :—

	Jats.	Rájpúts.
Bhera	562	...
Shahpur	271	388
Khusháb	1,960	90
Sargodha	51	36
Total district ...	2,844	514

They are a tribe of *zamíndár* status, owning 8 villages and nearly 37,000 acres in this tahsíl, south of Khusháb. They are quiet, industrious cultivators.

The Tiwánas

Bhera	10
Shahpur	192
Khusháb	1,278
Sargodha	60
Total district	1,540

In the Thal country west of Khusháb by far the most remarkable land-owning tribe are the Tiwánas, a fairly compact local tribe, who have by their strong right hand gained for themselves in comparatively recent times an importance out of all proportion to their numbers. Notwithstanding their claims to high Hindu descent and their pedigree reaching back through Ham and Noah to Adam, they were until about a century ago an ordinary Punjábi Musalmán tribe inhabiting a few villages at the north of the Thal desert. After a severe struggle with their neighbours, the Awáns, the head of the clan established independent authority over the Thal, and even after the Sikhs under Ranjít Singh brought them under subjection they found it advisable to employ the Tiwána chief as their local Governor. On the outbreak of the Second Sikh War the Tiwánas took the British side, and by their bravery and loyalty, both then and in the mutiny, gained great distinction and high reward. They are still much valued as cavalry soldiers, and many of them are serving in the Army, which perhaps accounts for the fact that they are almost the only tribe in the district of which there were more females than males resident at the time of the census (785 females to 755 males). The great war of 1914 has given the tribe a fresh opportunity to prove its worth, and has not found it wanting. Recruits have come forward in large

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Dominant land-owning tribes -- The Tiwánas.

numbers and two of the leading Maliks obtained positions on the staff, and have both been mentioned in despatches. Several of the members of the chief Tiwána family have titles and *jágírs* and seats in Darbár. They have also obtained grants of waste land on the inundation canals from the Jhelum in the Shahpur Tahsíl (where they hold 12 estates and about 30,000 acres), and squares, amounting to 4,300 acres in the Lower Jhelum Colony, besides the 12 estates and 85,000 acres owned by them in the Khusháb Tahsíl. Their number was returned as 3,202 in 1881 and 2,790 in 1891. The apparent decrease is mainly due to more correct classification. It is possible that enlistment in the army may have helped to reduce the numbers, but undoubtedly the increased exclusiveness of the clan (who are not unnaturally jealous of their reputation) is mainly responsible. In the same way the Núns, who are closely connected with the best Tiwána families by marriage, have dropped from 1,213 in 1901 to 599 in 1911. The Wadhals of Hadáli are acknowledged by the Núns and Tiwánás as their social equals, but tribes such as the Gájris and Máhls who have won much military distinction in Tiwána regiments are still somewhat inferior in status. It is not unusual for members of other Thal clans to call themselves Tiwánas, and many of the men enlisted in the army as Tiwánas do not belong to the true Tiwána clan.*

The other villages in the Thal are owned by various petty clans which are little known and have no claim to Rájpút rank: they are principally shepherds, tall, strong and of primitive ways ready to migrate with their flocks and herds according to the changes of the season.

The Awáns.

	Awáns.	*Jats*
Bhera	5,656	207
Shahpur	5,534	218
Khusháb	50,213	175
Sargodha	4,525	619
Total district ...	65,928	1,219

North of the Thal come the very compact tribe of the Awáns, who hold practically the whole of that part of the Salt Range which is included in the Shahpur District, and the greater portion of the plain lying at its foot. They own all but one of the

*In revenue proceedings, cases occur in which individuals have to reconcile their military credentials with their civil rights by proclaiming themselves "Mirási Tiwána."

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Dominant land-owning tribes— The Awáns.

Khusháb Salt Rang villages, and nine-tenths of the cultivated area of that circle. They are essentially the tribe of the Salt Range in this neighbourhood and extend north and east into the Attock, Jhelum and Ráwalpindi Districts. A number of them are also scattered as tenants in the villages across the Jhelum, and they own over 10,000 acres in 22 villages of the Bhera Tahsíl, and 9 villages and 9,863 acres in the Shahpur Tahsíl, besides 6,388 acres in Sargodha. They are distinctly a peasant tribe, and although they claim to be descended from Alif Shah, known also as Qutab Shah, and through him from Ali, son-in-law of the Prophet, they are, so far as language, customs and physique go, an indigenous Panjábi tribe. They are a brave and high spirited race, but prone to keeping alive old feuds and given to quarrelling, which often leads to riots and ruinous litigation. They are excellent cultivators and display beaver-like industry in maintaining their complicated system of irrigation from the mountain torrents by means of embankments and terraces, and reclaiming land from the steep hillsides. They are keen horsemen, and are always delighted to enter for a competition in tent-pegging (*chapli*). Their numbers were returned at last settlement as 52,526 and now 67,147, an increase of 28 per cent. A considerable number of them have taken service in the Army and Military Police and make good soldiers.

The Janjúhas.

Bhera	1,101
Shahpur	186
Khusháb	1,621
Sargodha	371
Total district ...	3,279

North of Khusháb towards the Jhelum border are three villages with 16,393 acres owned by the Janjúhas, a tribe found chiefly further north in Jhelum and Ráwalpindi. They are admittedly of high rank and claim a Rájpút descent, but are more probably the descendants of the aristocracy among the Awáns, just as the Rájpúts are the aristocracy of the Jats and the Khánzádas of the Meos in Gurgaon.

Their members were returned in 1881 as 3,766, but now as only 3,279, probably a result of more careful classification. They make good cavalry soldiers.

Minor land-ownig-tribes.

Of the minor land-owning and cultivating tribes the only ones of importance are :—(1) The Aráíns (12,504 against 8,236 at last settlement), who are chiefly found in the Jhelum Valley and

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Minor land-owning tribes.

especially near the large towns and villages where they ply their occupation of market-gardening: with them may be grouped the Maliyárs (3,798 against 1,953), who were once the main owners in some villages round Bhera, but have now sold much of their land; they too are skilful market-gardeners; indeed the terms Aráín and Maliyár practically mean "market-gardener" and it is probable that many now calling themselves by these names from their occupation originally belonged to other tribes. They are a quiet, industrious people, the men usually cultivating small plots of land on wells and *jhalárs*, while the women carry the green produce for sale to the neighbouring towns and villages. The high percentage of infirmities among Aráíns is noticeable and may be due to the great use they make of town manure. They own little land but are valued as tenants, and are, as cultivators, the best of the colonists. (2) There are a few Ahírs (1,540), owning land chiefly in Khusháb and near Sáhíwál. They are ordinary Musalmán peasants like their neighbours. (3) The Dhudis (1,405) are an ordinary peasant tribe owning a little land in the Jhelum Valley. (4) The Siáls (948) are an offshoot from the great Jhang tribe and own little land in this district, being chiefly found towards the Jhang border. (5) The Mughals (1,996) are probably for the most part indigenous Punjábís who have called themselves by the name of a ruling race just as others call themselves Rájpút, Sheikh or Sayad. (6) The Tárars (1,729) are an offshoot from the Gujrát tribe of that name and are found chiefly in Bhera Tahsíl where they own a little land. (7) The Kambohs (1,299, of whom 4 are Hindús, and 96 are Sikhs) are really of three distinct kinds:—(*a*) the Kambohs of Bhera and Sada Kamboh in Shahpur Tahsíl; although they own about 5,000 acres of land, they are not much given to agriculture, but devote themselves largely to Government service, especially in the Revenue Department. They are connected with the Qánúngo Sheikhs of Bhera, and would, if they were less improvident, be men of considerable wealth: (*b*) the peasant Kambohs found in the south of Shahpur Tahsíl; an industrious tribe with small holdings: (*c*) the colonists from the Central Punjab, who are, as agriculturists, almost in the same class as Aráíns.

Agricultural tribes recently established.

In addition to the old established tribes of the district, much new blood has of course come in, by reason of migration to the colony. Among these may be mentioned the Gujjars (2,004) who are mostly from Gujrát, and have generally settled in Bhera and Sargodha Tahsíls; and about 39,000 Jats (including some 7,000 Sikhs and 1,000 Hindús) of whom the most numerous district clans are the Chímas (3,050), the Waráiches

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Population.
Priestly classes—The Brahmans.

(3,640) and the Siyáls (2,594).

Bhera	...	...	...	... 2,461
Shahpur	...	...	...	... 1,589
Khusháb	...	...	...	... 1,078
Sargodha	...	...	...	... 1,188
		Total district		6,316

The Brahmans are found chiefly in the large towns and villages of the Jhelum Valley, where their Hindu clients live. They own very little land in this district and chiefly confine themselves to religious or semi-religious occupations, such as performing ceremonies, casting horoscopes and receiving the offerings of the pious. Few of them have any real knowledge of Sanskrit or more than a smattering of religious lore. Their numbers at last settlement were given as 5,455. Among them are included the Muhiáls, who are more addicted to employment in the Civil Service than to strictly Brahmanical occupations.

The Sayads.

Bhera	...	...	...	... 5,324
Shahpur	...	...	...	... 3,659
Khusháb	...	...	...	... 2,621
Sargodha	...	...	...	... 1,552
		Total district		.. 13,156

At last settlement the Sayads were returned as 9,506, so that there is an apparent increase of 38 per cent. A large proportion of these so-called Sayads are probably of indigenous descent and have come to be considered as Sayads because descended from some holy man who handed down his saintly character to his posterity. The Sayad proper is a *pír* reverenced and respected by the faithful, who support him by their offerings and sometimes gift to him a portion of their land. But in this district there are several large colonies of land-owning Sayads especially near Bhera and round Shahpur, where a Sayad family held sem-independent sway before Ranjit Singh subjugated the country. In the Shahpur Tahsil they hold 17 villages and over 20,000 acres, as well as about 35,000 acres in other tahsíls. They are unthrifty, bad managers, and for the most part in debt to their Hindu neighbours.

The Ulma.

Bhera	...	...	...	... 223
Shahpur		...	...	... 631
Khusháb	...	...	...	... 53
Sargodha	...	...	...	... 186
		Total district		... 1,093

CHAP. I-C. Population. Priestly classes—The Ulma

At last settlement the Ulma were returned as 3,141. In fact Ulma is not the name of a tribe or caste. A Musalmán of any tribe if he learns enough Arabic to conduct the services in the mosque and teach the village boys to read the Korán by rote is called an Ulma, but his original tribe is not forgotten, and if his descendants do not continne to act as mosque attendants they will be not known as Ulma but as belonging to their proper tribe. In 1911 many Ulma must have been returned under the name of their proper tribe.

The Qureshís.

Bhera	...	...	...	1,195
Shahpur	...	...	...	1,479
Khusháb	...	...	...	1,634
Sargodha	...	...	...	720
		Total district	...	5,028

Probably very few of the Qureshi inhabitants of this district are of true Arab descent. A Punjábi, who has attained a reputation for piety and become revered as a *pír*, transmits an odour of sanctity to his descendants, which if it does not make them Sayads will probably make them Qureshís. Altogether this tribe is recorded as owning about 4,000 acres in Bhera, 5,000 in Shahpur, and 14,000 in Khusháb. Two of them are zaildárs—Mián Muhammad Hayát of Sahbowál, and Pír Chan Pír of Pail—each of whom has by his personal character and public spirit done much to justify their families' superior status. At last settlement the Qureshís were enumerated as Sheikhs, of whom there were 6,718, but this number included most of those who are now enumerated separately under that name.

The Fakírs.

Bhera	...	...	...	1,583
Shahpur	...	...	...	870
Khusháb	...	...	...	810
Sargodha	...	...	...	635
		Total district	...	3,898

The Fakírs, who in this district are almost all Musalmáns, also generally assume a religious character and make use of blessings or curses, as the case may be, to expedite the alms-givings of the faithful. They are for the most part simply lazy beggars who find a roving mendicant's life more to their taste than one of monotonous industry. In some parts of the district they have acquired land by gift, but are rapidly losing it to their more thrifty neighbours. At last settlement the number of

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Population.
Priestly classes—The Fakírs.

Fakírs was only 1,429, so they have nearly trebled in the past 20 years. This does not of course mean more than that a number of people have succumbed to the temptation to become parasites on the greatly increased wealth of the community.

The Bharáis (790) go about beating drums and begging in the name of Sakhi Sawar.

The Sheikhs.

Bhera	...	...	...	1,589
Shahpur	...	...	...	478
Khusháb	...	...	...	609
Sargodha	...	...	...	813
		Total district	...	3,489

The Sheikhs of this district may generally be divided into three classes :—(*a*) ordinary Punjábi agriculturists, who have adopted this name as a mark of special respectability ; they rank rather lower in the public estimation than the Qureshís ; of this kind are the Sheikhs of Malakwál (now transferred to Gujrát District) and Chak Sheikhán, near Jhawarián : (*b*) Muhammadans who have devoted themselves largely to civil service ; such are the Sheikh Qánúngos of Bhera town, who own 836 acres of land, largely by purchase, in Bhera and its neighbourhood : (*c*) recent converts to Islám from castes not recognized as Musalmán. It is now only by a considerable straining of the truth that Sheikhs can be included among the priestly castes.

Mercantile classes—The Khojas and Piráchas.

Practically the whole of the trade of the district is in the hands of four castes, the Aroras, Khatrís (including Bhátias), Khojas and Piráchas, the two former castes Hindu and the two latter Musalmán. The Khojas (3,856 against 3,426 at last settlement) and the Piráchas (who numbered 598 in 1891 and 667 in 1901, but have now classed themselves as Khojas) are found chiefly in Bhera, Shahpur and Miáni towns, where they do a considerable amount of trade, chiefly in cotton and grain. Some of them have dealings with Bombay and Karáchi on the one hand and with Persia and Bukhára on the other. They own by purchase nearly 3,000 acres chiefly round Bhera.

The Khatrís and Aroras.

The Khatrís and Aroras between them make up three-fourths of the total Hindu and Sikh population of the district. More than a fourth of them live in the towns and most of the remainder in the large villages, where they alone are the traders, shopkeepers and bankers of the community. They are a thrifty and intelligent body of men, much more patient and far seeing than the Musalmán peasants, who are as a rule much indebted to them. By advancing small sums to the peasants at a

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Population.

Mercantile classes—The Khatrís and Aroras.

high rate of interest and allowing it to accumulate until it is impossible for the peasant to pay, they have managed by the judicious use of our unsympathetic Civil Law to compel the peasants to part with a large proportion of their more valuable land by sale or mortgage, which in many cases is practically equivalent to a sale. The Khatri or Arora money-lender generally prefers a mortgage to a sale, as this does not expose him to a suit for pre-emption and he finds it easier to persuade his peasant debtor to mortgage than to sell his land. Yet since the regular settlement 55 years ago about 5 per cent. of the cultivated land in the Jhelum valley has passed by sale into the hands of money-lenders. Khatrís are the chief owners of several estates in Bhera, and five in the Shahpur Tahsíl, and own some 40,000 acres chiefly in the neighbourhood of the large towns, and of the flourishing village of Chak Rám Dás which is owned entirely by a family of Khatrís of long standing as landlords. Aroras own over 96,000 acres in the district, but nearly half of this consists of Thal land in the neighbourhood of Núrpur and Rangpur Baghur, while the remainder is in the neighbourhood of Sáhíwál, Fáruka, Khusháb, Girot, Hadáli and Mitha Tiwána. Both classes, however, hold in mortgage about 10 per cent. of the cultivated area of the Jhelum valley and a considerable proportion of the best proprietary land elsewhere, and altogether these two money-lending classes between them are responsible for about a fifth of the total fixed land revenue of the district. Altogether a very large share of the landlord's profits from the proprietary land of the district finds its way into their pockets. No class has benefited from the British Rule nearly so much as these Hindu money-lenders. Our laws and our principles of political economy treat thrift as almost the only virtue, and have given the patient and parsimonious shopkeeper an advantage he has not been slow to use over his thoughtless and extravagant Musalmán neighbour; and so he has secured a command over much more than his share of the accumulated capital and even of the land of the district. The Khatrís and Aroras too have been much more ready than the peasant classes to avail themselves of the means of education offered by our schools, and thus have improved their position and especially have secured a very large proportion of the appointments in our courts and offices. While among the Musalmáns only about one male in fifty can read and write, more than one in three can do so among the Hindus and Sikhs; and more than half the males in the district having a knowledge of English belong to the Arora or Khatri caste. The Bhátiás are in this district a sub-section of the Khatrís

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Population.

Mercantile clases— The Khatrís and Aroras.

with whom they eat. The numbers of these tribes are as follows :—

Caste.	Tahsíl Bhera.	Tahsíl Shahpur.	Tahsíl Khusháb.	Tahsíl Sargodha.	Total District.	Hindu.	Sikh.
Khatri ...	10,859	1,822	3,485	2,353	18,519	14,583	3,936
Bhátia ...	1,427	532	21	76	2,056	1,555	501
Arora ...	10,971	16,966	13,783	5,333	47,053	31,026	16,027

The Bhera Tahsíl may be considered a sort of boundary between the Khatrís and Aroras. In this tahsíl the numbers of the two castes are about equal. North of this in Jhelum and Ráwalpindi the Khatrís greatly exceed the Arorás in number, while to the south and west, in the Shahpur and Khusháb Tahsíls and in the Jhang and Miánwáli Districts the Aroras greatly outnumber the Khatrís. The Khatrís occupy a considerably higher rank in the social scale than the Arorás, and are, as a rule, more intelligent and enterprising and less pusillanimous. According to the statistics the increase of numbers since last settlement has been Khatrís and Bhátias 12 per cent. and Aroras 15 per cent., so that apparently the Aroras are having the better of the Khatrís in this respect. The probable explanation is that plague has never been so fatal in Khusháb as it was in Bhera in 1904 and 1907. As regards religion 29 per cent. of the Khatrís and 34 per cent. of the Arorás have returned themselves as Sikhs, but some of them, especially of the Aroras, are only nominally Sikhs, and not very clearly distinguished from Hindús; the Khatri Sikhs, however, are generally more particular about their tenets and customs, and may mostly be considered true Sikhs.

Artisans and menials.

In this district practically the whole of the artisan and menial classes are Musalmán except the Sunárs, many of whom are Hindu, and the Chúhras, many of whom still profess their own primitive religion. Some of the classes of artisans, such as Lohárs, Juláha, Teli, Dhobi, are more trade-guilds than tribes, and a family giving up its traditional occupation and taking to another would, after a generation or two, be considered to belong to the caste whose common occupation it had adopted, so that

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Population.

Mercantile classes—Artisans and menials.

the different castes are not divided from each other by fixed and lasting boundaries. Still so strong is the tendency to follow the ancestral occupation and so closely are the persons belonging to each such caste or trade-guild inter-connected by community of occupation, which generally carries with it inter-marriage and similarity of social customs, that these well-recognised divisions are of real importance in the frame-work of society. In general estimation the different artisan castes take rank according to the nature of their usual occupation, workers in metal and wood ranking higher than workers in clay, and they again higher than workers in leather. Lower down, the distinction is partly made according to the nature of the food eaten, Mirásís ranking low because they eat almost any one's leavings, and Chúhras lowest of all because they eat the flesh even of animals that have died a natural death.

The condition of these classes as a whole has greatly improved since the introduction of British rule. The enormous rise in the prices of agricultural produce and the rapid development of cultivation and irrigation have led to a great demand for the services of all whose work is connected with the operations of agriculture, and their remuneration has increased in proportion. Those who are paid in kind, such as the Tarkhán, Lohár, Kubhár and Musalli, get a larger proportion of the produce, and its money value has greatly risen. The custom of paying in cash for all services required on State works, such as canals and railways, combined with the greater plenty of silver coin and the greater demand for labour of all kinds, has made it much more common to pay for services in cash than in kind, and has led to a marked rise in money wages, which taken along with the greater steadiness in the demand for labour, has benefitted the lowest class of labourer more than he has suffered from the rise in prices. A much larger proportion of the lower castes than formerly have amassed some little wealth in coin or ornaments, and it is not uncommon to find members of the artisan castes in possession of plots of land as mortgagees. The demand for tenants to break up new land has led many of these castes to give up their traditional occupation and become cultivators, which means for them a distinct rise in the social scale and an improved means of subsistence.

The Sunárs.

The Sunárs or Zargars (5,707 against 4,139 at last settlement, an increase of 38 per cent.) are the workers in gold and silver, and have much more employment than formerly in making up the jewellery in which form all classes of the people prefer to hoard their savings. Two-thirds of them are Hindús

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Population.

Mercantile classes—The Sunárs.

or Sikhs and one-third Musalmán. They are chiefly found in large towns and villages. Many of them advance money on the security of ornaments. Some have a bad reputation as receivers of stolen jewels, the proceeds of house-breaking, which they melt down at once to avoid recognition.

The Tarkháns.

The Tarkháns (17,089 against 12,568 at last settlement, an increase of 36 per cent.) do all the carpentry work of the district, making agricultural implements, the wood-work of the Persian-wheel, &c., generally in return for a customary payment in kind. They are also the brick-layers of wells and of buildings of burnt brick. They are found chiefly in the villages and are practically all Musalmáns. The carpenters of Bhera and Sáhíwál are noted for the carving of house-fronts and for lacquer work.

The Lohárs

The Lohárs (8,433 against 6,026 at last settlement, an increase of 40 per cent.) are the blacksmiths and workers in iron. They are practically all Musalmáns and are found chiefly in the villages. They are regular agricultural menials receiving payment of customary dues in kind in return for their making and mending the iron part of agricultural implements, the customer furnishing the iron.

The Kubhárs.

The Kubhárs (16,888 against 14,164 at last settlement, an increase of 19 per cent.) are the potters, makers of bricks, and clay vessels. They are almost all Musalmáns, live both in the towns and villages, are true agricultural menials and get customary dues in kind in return for making the earthenware vessels required for the Persian-wheel and for domestic use. Many of them also keep donkeys and act as petty carriers within the town or village area.

The Juláhas.

The Juláhas (26,300 against 25,888 at last settlement, an increase of 2 per cent.) are more generally called Paoli in this district. They are almost all Musalmáns and are found not only in the towns but scattered through the villages all over the district. Their principal, almost their sole, occupation is weaving cotton and wool into cloth. They are paid not in kind but by the piece. A considerable quantity of coarse cotton cloth woven by them is exported towards Pesháwar and Kábul, but their occupation has suffered by the growing fashion for European and machine-made piece-goods. They are a turbulent class, ever ready to resent their position of inferiority to the peasantry and to rebel against the customary poll-tax or ground-rent imposed upon them by the landowners. Weavers are popularly credited with an allowance of intelligence inferior to that of their neighbours.

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Population.

Mercantile classes—The Juláhas.

Many people have been deceived by the mirages in the Chhachh, but a weaver is said to have been seen laboriously wading across one! In Bhera there is a weavers' co-operative society, which promises well, but a similar venture in Khusháb soon came to an inglorious end. There is no doubt that collective bargaining would make a great difference to the wealth of this class, and they could also improve their income considerably by adopting the methods taught at the Ludhiána School of Weaving. It is to be hoped that their supposed shortage of intellect will in time be cured by education, which they seem to ensue more eagerly than most Musalmáns. The very small increase in their numbers is probably to be taken as meaning that they take freely to other occupations, and change their caste-name when they do so. As cotton-mills increase in the Punjab it is probable that the number of weavers will still further diminish.

The Náis.

The Náis (10,886 against 8,911 at last settlement, an increase of 22 per cent.) are found everywhere and are almost all Musalmáns. They are the barbers of the country, even Hindus having their heads shaved by Musalmán Náis. They also act as leeches, perform circumcision, and are the recognized messengers in the case of all domestic ceremonies, carrying notices of births, marriages, and, in this district also of deaths. In the villages they are paid in kind among the regular menials.

The Telís.

The Telís (3,323 against 2,815 at last settlement, an increase of 18 per cent.) are all Musalmáns and their occupation is oil-pressing. They are closely connected with the Qasáís or butchers (8,254 against 6,451 at last settlement, an increase of 26 per cent.) who are rather a trade-guild than a tribe and are most numerous in the large towns. Some of the Qasáís act as sheep-dealers or themselves keep flocks of sheep and goats which they breed for sale. Some of them have a bad reputation for helping to make away quickly with stolen cattle. The Penjas (62) or cotton-scutchers are generally Telís by caste.

The Máchhís.

The Máchhís (16,141 against 12,646 at last settlement, an increase of 28 per cent.) are all Musalmáns and are scattered all over the district. Their chief occupation is that of bakers, the men fetching the fuel and the women baking at their ovens the cakes brought by the village housewives and taking payment in kind at the time. Water-carrying is generally done by the people themselves. With the Máchhís may be classed the Jhínwars (850) who are for the most part Hindu or Sikh and have come into the colony recently.

The Malláhs.

The Malláhs 1,371 against 1,017) are the boatmen of the rivers and are all Musalmáns.

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Mercantile classes—The Dhobís.

The Dhobís (8,301 against 6,457, an increase since last settlement of 27 per cent.) are the washermen and are almost all Musalmáns. The Chímbas (8) or calico-printers and Liláris (96), Charohas or dyers, and Darzís (576) or tailors are generally of the Dhobi caste They rank low as handling dirty clothes and keeping donkeys.

The Mochís.

The Mochís (22,588 against 18,263 at last settlement, an increase of 23 per cent.) are all Musalmáns. They are the workers in leather and rank low because they handle skins. In this district they generally confine themselves chiefly to making shoes and other leather-work besides tanning skins. The Mochi, whose perquisite the skins of dead cattle are, has benefited considerably by the great rise in the price of skins, but he is also beginning to find that owners prefer to sell the skins themselves.

With the Mochís may be classed the 1,890 Chamárs, who are their Hindu or Sikh equivalents. They are practically all settlers in Sargodha Tahsíl from outside districts, and five-sixths of them are Hindús.

The Mirásís.

The Mirásís (13,035 against 10,339 at last settlement, an increase of 26 per cent.) are the bards, musicians and genealogists of the people, and their services are in request at all domestic functions and especially at marriages. Their women are often prostitutes and it is a noticeable fact that in this tribe almost alone of all tribes in the district the number of females exceeds that of males (6,931 females to 6,104 males), a fact which suggests that the ranks of their women are recruited otherwise than by birth within the caste. The Bháts 81) or bards may be mentioned along with the Mirásís whom they resemble. The Mirásís of the Salt Range are noted for their enterprise and audacity. They range all over the Punjab and even find their way to Calcutta. As soon as they are far enough from home to be safe from recognition they assume all sorts of dignities. There are tales of men who have earned much repute (as well as large emoluments) in the guise of Mahants in Multán. Others have made considerable sums as Professors of Music down-country. Their houses are generally about the handsomest in the village.

The Ods.

The Ods (986) are professional navvies, mostly *quasi*-Hindu by religion, who render invaluable aid in the excavation of canals. They are migrants, and have decreased in numbers by nearly 100 per cent. since 1901, when the construction of the Lower Jhelum Canal offered work for all.

The Chúhras and Musallís.

Generally speaking a sweeper, if he is a Muhammadan, is called a Musalli, and if he is not, is called a Chúhra, but there is

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no tribal distinction, and some of the Muhammadan sweepers are still numbered among the Chúhras ; in the census of 1901 and its predecessors no distinction was made. The distribution is as follows :—

Tahsil.	Chúhras.	Musallís.	Total.		
			Hindu.	Sikh.	Musalmán.
Bhera	677	23,903	484	34	24,062
Shahpur	84	11,233	67	...	11,250
Khusháb	149	7,786	8	...	7,927
Sargodha	4,564	13,351	3,973	396	13,546
Total district ...	5,474	56,273	4,532	430	56,785
At last settlement ...	35,401		4,747	177	30,477

They have increased by no less than 75 per cent. since last settlement ; 2,495 Chúhras and 10,210 Musallís migrated to the colony from other districts, and if these are deducted, the increase is 38 per cent., or nearly 2 per cent. per annum, which is much higher than that of the population as a whole.

Besides their traditional occupation of doing scavenger's work they are the chief field labourers and get payment at customary rates in kind for their assistance, especially at harvest time when whole families of them move about the country to help in reaping the grain getting as a rule every twenty-first sheaf, which sometimes means as much as a rupee a day. They are also the chief earth-diggers of the district and make large earnings at such work as making roads or clearing out canals, the usual rate of wages being Rs 3-0-0 per thousand cubic feet equivalent to about eight or twelve annas a day, while forty years ago the usual rate for such labour was less than two annas a day. The position of the Chúhras has been much improved by the great increase in the demand for labour, but they are an unthrifty hand-to-mouth class and are the first to feel the pinch of bad times. They are very ready to wander, and small encampments of them may often be seen at the roadside, the whole family moving about the country in search of food, with a small tent of rags, a cot or two, a bundle of clothes, a donkey and a few dogs as their whole

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worldly belongings. They furnish a considerable number of criminals, the Chúhra generally confining himself to petty thefts and house-breaking and leaving the more gentlemanly pursuit of cattle-theft to the Jat or Rájpút peasant. Few as the Mazhabís are here, they have furnished a few recruits to the Pioneer regiments. The Musallís are in this district admitted to unusually equal terms by the Musalmáns, who accept water and food from their hands only requiring that they should be circumcised, should have repeated the Kalima and should have given up eating carrion or anything "abominable." The unconverted Chúhra eats the leavings of anybody, the flesh of animals that have died a natural death, snakes, lizards, foxes, jackals, or as one of them put it, any thing but dogs,—he would even eat his donkey, if it happened to die.

The Bázígars.

The Bázígars (2,430) and Nats (389) may be taken together. The numbers at last settlement were 1,065 and 305, an increase of more than 100 per cent. They are acrobats and tumblers and have no fixed residence, but move about from place to place, living in moveable shelters made of grass, and using donkeys and camels to carry their goods about on. The Bázígars are almost all returned as Hindús and the Nats as Musalmáns; both are a gipsy, almost outcaste, tribe living largely on the leavings of others and on jungle vermin. Their women used to have a reputation for chastity.

The Sánsís.

The Sánsís (673) are especially a jungle tribe, have no fixed residence, and are often found encamped in waste places where they capture and eat jungle vermin of all sorts. They are not a particularly criminal tribe in this district.

Increase of different castes.

The total population of the district has increased by 39 per cent. since 1891, and we have seen that nearly half of this increase is due to immigration, and half to natural increase. How the increase has been distributed over the various occupations and castes can be judged from these figures :—

Occupation.	Caste.	Increase per cent.
A—Agriculture ...	Jat-Rájpút	64
	Awán...	28
	Khokhar	20
	Baloch	29
	Aráíns-Malyár	60

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Population
Increase of different castes.

Occupation.	Caste.	Increase per cent.
B.—Religion ...	Sayad	38
	Brahman	16
	Qureshi-Sheikh	27
C.—Business ...	Khatri	12
	Arora...	15
D.—Skilled labour ...	Sunár...	38
	Tarkhán	36
	Lohár...	40
	Kubhár	19
	Juláha	2
	Máchhi	28
	Teli	18
	Dhobi	27
	Mochi	23
E.—Unskilled labour, Chúhhra,	Mussalli	80

It will be seen that the unskilled labourers have increased more than any other section of the population ; but the agriculturists are not far behind : the Sayads, who minister to the souls of the great majority of the population, the Sunárs, who minister to their vanity, and the smiths and masons, who supply the most necessary instruments of agriculture have all kept pace with the general rate of increase ; the Máchhís who prepare the food, and the Darzís, Dhobís and Mochís, who supply, clean and repair raiment, have lost a little ground ; the potter is naturally less needed in a world of canals than in one of Persian wheels, and the oil-presser is also being ousted, partly by the improved oil-press, and partly by the European exporter. The weavers afford a rather startling proof of the power of Manchester.

Leading families—The Tiwánas of Mitha-Tiwána.

By far the most important family in the district is the Tiwána family of Mitha-Tiwána on the edge of the Thal. An account of their early history has already been given in Section B, and a full account will be found in Massy's " Punjab

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The leading families— The Tiwánas of Mitha-Tiwána.

Chiefs" Volume II, pages 167-183 (1910 edition)*. The three Maliks who in the last generation did such good service for Government and received the title of Khán Bahádur, besides other rewards, *viz.*, Maliks Fateh Sher Khán, Sher Muhammad Khán and Sáhib Khán, C.S.I., have all died. Malik Fateh Sher Khán left a minor son, Muhammad Sher Khán, who was till 1915 under the Court of Wards. He holds a perpetual *jágír* in four villages (value Rs 5,604) besides a life *jágír* of Rs. 4,089 for his father's mutiny services. He holds also a lease of State land at Islámabad (in the Thal) close to Gunjiyál in addition to his ancestral land.

Malik Sher Muhammad Khán, Khán Bahádur, left two minor sons, Dost Muhammad and Ghulám Jiláni, who were also till 1915 under the Court of Wards. Malik Dost Muhammad holds a prepetual *jágír* of the value of Rs 8,856, a life *jágír* in consideration of his father's Mutiny services of Rs. 450, and a *jágír* for the life of himself and his son of Rs. 750. The brothers own a large area of land in the Khusháb Thal, and 1,500 acres of land near the Jhelum, part of which is irrigated from the Corbynwah Canal but is not very productive. They are entitled to irrigate their lands from this canal free of water-rates for their life-time. In addition to his lands in Khusháb, Malik Dost Muhammad Khán has squares on the Lower Jhelum Canal. M. Ghulám Jíláni, who has recently been accepted for a direct commission in a Silladár Camel Corps, only has a one-third share in the family estates in Khusháb Tahsíl.

All these three young representatives of this famous family have yet to win their spurs.

Malik Sáhib Khán, Khán Bahádur, C.S.I., after doing excellent service in the Mutiny, obtained a grant of 8,700 acres of waste land at Kalra in the Shahpur Tahsíl and constructed a canal to irrigate it. This has now become a most valuable estate. Malik Sáhib Khán, who had earned a reputation for straightforward, truthfulness and integrity, died in 1879, leaving one son

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* A different and more-far-reaching account is given in an Urdu history of M. Jahán Khán of Jahánabad, published anonymously under the title "Jahán Numa." The author (who unfortunately quotes no authorities) traces the descent of the tribe from Adam, through Liam; this partiarch is supposed to have migrated to Sindh, and his eldest son, Hind, had four sons, of whom the eldest, Purab, had 42 sons, Kishen being his successor. The line is traced down to the time of the Pandas, when Rája Jamaid was succeeded by Tiwána; five generations later comes Rái Melo Dás, who after being defeated by Feroz Shah, King of Delhi, fled to Shakarganj, where he, together with his adherents *Siáls*, Kharra's, Harrals, Kaleras, Dhuddis, Bhattís, Chadhars, &c., was converted to Islám by Hazrat Sheikh Faríd-ud-dín. From Shakarganj Rái Melo Dás went to Hot, *Ráís* of Dera Ismail Khan, who gave him Darya Khan in *jágír*. Of his three sons, Jetu succeeded, and is the progenitor of the existing Tiwánas. Lakhu went east and became a Sikh, and Wánu went to Sindh. One of Wanu's sons went to Ráwalpindi, and there begat the founder of the Gheba clan. Rahdári was the village first visited by the Tiwánas in this district, and from there they spread northward and eastward to Ukhli Mohla and Mitha-Tiwána.

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The leading families—The Tiwánas of Mitha-Tiwána.

Malik Umar Hayát Khán, who was brought up under the Court of Wards and educated at the Aitchison Chiefs' College in Lahore, where he gained a good colloquial knowledge of English. In 1895 he was, on coming of age, put in charge of his splendid property, the income of which is well over a lakh of rupees per annum, besides large accumulated and invested savings. In addition to his inherited estates—Kálra and Megha Kadhi in Shahpur, and some land in Khusháb—Malik Umar Hayát has purchased Sardárpur and Chak Umar, as well as other land in Shahpur and Bhera. He owns three inundation canals—the Píránwála, the Chahárami, and the Sáhib Khán Wāla—which add greatly to his wealth and prestige. He has also squares in the Lower Chenáb and Lower Jhelum Colonies; in the latter he maintains a large stud-farm. He has long been an Honorary Magistrate and exercises 1st class powers; he was for a time Vice-Chairman of the District Board. He is an Honorary Captain in the XVIIIth King George's Own Tiwána Lancers, and has seen active service in Somaliland (as Assistant Commandant of the 54th Camel Corps, 1903), Tibet (1904), France (1914-15), and Mesopotamia (1916); on the first occasion he got the medal and clasp and was mentioned in despatches; in Tibet he got the medal; in France, where he served on the staff of the Cavalry Brigade, he was three times mentioned in despatches. He was made a Companion of the Indian Empire for his military services in 1906, a Member of the Victorian Order in 1911, on account of his share in the Delhi Darbár, where he was Deputy Herald, and a Knight-Commander of the Indian Empire in 1916 for his services with the Expeditionary Forces. He has served on the Legislative Councils of His Honour the Lieutenant-Governor and His Excellency the Governor-General, being nominated for the latter body a second time in 1913. In general, it may be claimed that the Malik's record of service is as varied and meritorious as that of any landowner in the province and, as he is still in Mesopotamia, there is reason to hope that he may again add to his laurels. He enjoys a life *jágír* of one-quarter of the revenue of Megha (worth nearly Rs. 700).

Malik Fateh Khán, known as Motiánwála ("The Man of Pearls"), who died so bravely at Dalípgarh, left four sons besides Khán Bahádur Malik Fateh Sher Khán. Of these Maliks, Alam Sher Khán and Sultán Khán have no descendants living; Malik Sher Bahádur, who held the post of Munsiff, is now dead and two of his sons, the eldest of whom Malik Khán Mohammad of Sherpur has a seat in Darbár, enjoys a perpetual *jágír* of about Rs. 1,600. Malik Ahmad Khán is also dead; his son, M. Malik Khán, has a seat in Darbár and a perpetual *jágír* of about Rs. 2,500.

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Population.

The leading families—The Tíwánas of Mitha-Tiwána.

In the other main branch of this family, *viz.*, the descendants of Malik Ahmad Yár Khán, to which Malik Sher Muhammad Khán and Sáhib Khán belonged, were Maliks Jahán Khán and Fateh Khán, brothers of Malik Sáhib Khán. Malik Jahán Khán served as Kárdár under Dewán Sáwan Mal, did good service in the Multán campaign and in the Mutiny, and received a Mutiny pension. His grandsons, Maliks Muhammad Hayát Khán and Sher Muhammad own, by purchase from Government, 511 acres of valuable land at Kot Muhammad Khan, south of Shahpur, and the former has a seat in Darbár. Their father, Khán Bahádur Malik Muhammad Khán, did good service as Honorary Magistrate and Munsiff and Sub-Registrar for the Shahpur Tahsíl. Malik Fateh Khán, the other brother of Malik Sáhib Khán, did good service in the Mutiny, for which he received a grant of land, a life *muáfi*, and ultimately the title of Khán Bahádur. His son, Malik Muzaffar Khán, has a seat in Darbár and owns about a thousand acres of valuable land at Muzaffarabad, near Shahpur Civil Station, as well as 30 squares in the Lower Jhelum and 10 in the Lower Chenab Colony: he has a stud-farm in the former. He was at one time Jamadár in the Guides Cavalry and promised to make a good officer, but resigned his commission to attend to his father's property at home. He is Vice-Chairman of the District Board and Sub-Registrar for Shahpur Tahsíl and is as much respected for his abilities as he is popular.

Several other members of this Mitha Tiwána family have attained to good positions in the Army and Police, the Tiwánas being considered among the best of the Cavalry soldiers in the Native Army. Specially deserving of mention are Khán Sáhib Ressaldár-Major Sikandar Khán, and the sons of Ghulám Muhammad Khán, of whom Amír Khán became an Inspector of Police, Ahmad Khán a Subedar-Major, and Dost Muhammad Khán a Rissaldár.

The Tiwánas of Hamoka.

Another branch of the Tiwána clan derives its origin from Hamoka on the right bank of the Jhelum, south of Khusháb. An account of it will be found in Massy's "Punjab Chiefs," Volume II, page 308. Malik Sultán Mahmúd Khán did good service under Edwardes at the siege of Multán, and again made himself most useful during the Mutiny. He was for years Inspector of Police in Shahpur District and won universal commendation for the impartial and trustworthy manner in which he performed his duties. His only son Malik Khuda Bakhsh Khán was brought up under the Court of Wards and is now a first grade Extra Judicial Assistant Commissioner. He was from 1903 to 1907 British Envoy

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The leading families—The Tiwánas of Hamoka.

in Kábul, and for his services there he was made Náwab Sáhib in 1907, and received from His Majesty the Amír the title of Izzet Nishán. He owns nearly 4,000 acres of land in Shahpur Tahsíl, purchased from Government from time to time, and irrigated from the Sultán Mahmúdwála Canal, which is his own property, and the Meknanwála, in which he has purchased a sixth share: he has also purchased land elsewhere, and owns a considerable area in Hamoka. Besides this he has squares in the Lower Jhelum Colony where he keeps up a stud-farm. His son, Allah Bakhsh Khán, has recently been appointed Extra Assistant Commissioner, and promises to follow in his father's footsteps.

The Nawáb Sáhib's first cousin, the late Malik Ghulám Muhammad Khán, was Sub-Registrar of Khusháb Tahsíl for many years.

The representative of another branch of the family, Malik Khán Muhammad Khán, is *zaildar* of the Hamoka circle, and during his minority his uncle, Sáhib Khán, maintained the reputation of the family.

The Tiwánas of Hadáli.

An important branch of the Mandyál Tiwánás belongs to Hadáli between Khusháb and Mitha Tiwána. From the earliest times the members of this branch have distinguished themselves as good, law-abiding and loyal subjects of the British Empire and of these the most prominent was the late Sardár Bahádur Malik Jahán Khán, *Raís* of Jahánabad. He rendered excellent service in the Mutiny by raising at his own expense a troop of about a hundred horsemen, placing them at the disposal of Government, and leading them with great ability and bravery. He fought in the actions at Jhelum, Ajnála and Kalpi as well as in several actions with General Napier in Central India, but was severely wounded while attacking six of the enemy single-handed at Ranade. When the crisis was over Malik Jahán Khán was given the title of Sardár Bahádur for his conspicuous services and was made a Risaldár-Major of the 18th Bengal Lancers and shortly afterwards was nominated as an Aide-de-Camp to the Commander-in-Chief. He died in 1893. His eldest son Malik Muhammad Mubáriz Khán joined the 9th Bengal Lancers (now known as 9th Hodson's Horse) in 1885 and supplied his own troop, paying Rs. 15,000 as the subscription of his men from his own pocket. He retired as a Risaldár in 1891 on an invalid pension, but he has always kept his troop at full strength by supplying all the recruits required and has also paid their subscriptions. He was highly thought of while in

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The leading families— The Tiwánas of Hadáli.

the regiment, of which he is now an Honorary Captain. He resides at Jahánabad near Shahpur, where he and his brother own a very fine property consisting of 3,000 acres free of land revenue for ever as well as 5,000 acres of revenue-paying land in that estate and Allahabad, Vegowál and other villages in the immediate neighbourhood, all being irrigable from their private canal, the Jahán Khánwála. The Malik has greatly added to the family property which is now four times what it was at the time of his father. Besides his lands in the neighbourhood of Shahpur, and his ancestral lands in Hadáli, he has nearly 700 acres in Jhang and other districts. He has a good stud of brood mares at Jahánabad.

The Malik now devotes most of his time to his estate and makes a very good landlord. He was granted the title of Nawáb in 1915 mainly on account of the leading part he took in founding and endowing the O'Brien Islámia High School at Shahpur. He is the President, Vice-President or a member of almost all public Anjumans and is a trustee of the M. A.-O. College at Alígarh. He is looked upon as one of the trusted leaders of the Muhammadan community in the Punjab and even outside it. He has, with Government permission, jointly with his brother undertaken the cost of maintaining his own Troop in the Hodson's Horse, since the earliest period of the present war. He is an Honorary *zaildár* for his own territory and also a member of the District Board Shahpur. He was a member of His Honour the Lieutenant-Governor's Legislative Council from 1910—1913.

His younger brother is Malik Muhammad Mumtáz Khán, who is an Imperial Cadet, and holds at present the rank of Captain. He is fighting in Flanders and has been mentioned in despatches by Field-Marshal Sir John French. Several other members of the family (some of whom have risen to the highest ranks in the Indian Army) are also fighting on the battlefields of Flanders, Egypt and Mesopotamia. Sher Bahádur Khán is a Risaldár-Major and Sardár Bahádur, and received the Royal Victorian Medal from His Royal Highness the Prince of Wales in 1905.

The Waddhals of Hadáli, another branch of the Tiwánas, also deserve mention. One of them, Malik Fateh Khán, Resaldár in the 18th Bengál Lancers, was a good old soldier and was allowed to purchase 505 acres of valuable canal irrigated State land south of Shahpur. His three sons have all risen to good positions in the Native Cavalry. The eldest Malik Ahmad Yár Khán was Risaldár-Major of the 18th King George's

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Own Tiwána Lancers, and was granted honorary rank as Captain, the title of Sardár Bahádur and the Royal Victorian Medal. The second brother, Ghulám Muhammad Khán, is also a Rissaldár-Major, and has the title of Sardár Bahádur, as well as that of Khán Bahádur and the Royal Victorian Medal. He was Aide-de-Camp to General Nixon in Mesopotamia. The third brother, Muhammad Hayat Khán, is also a Risaldar-Major, and has the title of Bahádur. A more detailed account of the family will be found on pages 190-192 of Massy's "Punjab Chiefs," Volume II.

The Nún family.

Closely related to the Tiwánas are a family of Núns, with whom the Tiwánas intermarry. An account of them will be found at page 195 of Massy's "Punjab Chiefs," Volume II. It was till recently represented by two cousins, Khán Bahádur Malik Muhammad Hákim Khán and Malik Muhammad Hayát Khán, both of whom had a seat in Darbár. Malik Hákim Khán did good service in the Mutiny, when he was wounded, and afterwards as Tahsíldár, retiring on pension with a reputation for uprightness and honesty. He purchased from Government a fine estate at and near Kot Hákim Khán of 2,000 acres, and the property has been further enlarged by the purchase of a considerable area from neighbouring villages. It is all irrigable from the private canal owned jointly by him and his cousin. He developed his estate most successfully, showing himself an enlightened and considerate landlord, a good type of the gentleman of the old school. He was one of the last of the older generation and much respected in the district. He enjoyed a life *muáfi* for his Mutiny services, but this was resumed at his death in 1911. His uncle, Malik Fateh Khán, Nún, did good service at the siege of Multán under Edwardes, and received a pension. His son Malik Muhammad Hayát Khán was educated at the Aitchison College and passed the Entrance Examination of the Punjab University. He holds 3,500 acres of valuable land at Núrpur, west of Bhera, irrigated by the private canal owned jointly by his cousin and himself. He is an Extra Assistant Commissioner, with an excellent record.

Malik Hákim Khán left six sons; the eldest, Malik Sher Muhammad Khán, is an Honorary Magistrate and Honorary *zaildár*, a keen horse-breeder, and an energetic landlord: his real brother, Malik Fateh Khán, is Inspector of Co-operative Credit Societies for the district: these two have inherited the lands of Kot Hákim Khán and Sher Muhammad Wála: the third and fourth sons, Ata Muhammad Khán, (who was for a time in the

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Leading families—The Nún-family.

Canal Department) and Sáhib Khán, (who is an Extra Assistant Commissioner) are also real brothers and inherited the lands in Fatehabad and Nabi Shah; while the remaining pair of real brothers, Sardár Khán (who is an Honorary Magistrate) and Sultán Ali Khán inherited Sardárpur near Cháwa.

The Biloch family of Sáhíwál.

An account of the early history of the Bíloch Chiefs of Sáhíwál has been given in section B, and a fuller account will be found in Massy's "Punjab Chiefs," Volume II, page 184. Sardár Langar Khán was succeeded by his eldest son, Muhammad Hayát Khán, and he again by his brother, Sardár Mubárak Khán, who died much embarrassed by debt. The present head of the family is Sardár Muhammad Chirágh Khán,* who was for a time Dárogha of Canals under the Deputy Commissioner, and is a *zaildár*, a nominated member of the District Board, President of the Municipal Committee, and member of the local bench of Honorary Magistrates, in all of which capacities he has done good work. He and his brother Fateh Khán, and uncle Lashkar Khán, hold a perpetual *jágír* in five villages of the value of Rs. 3,837, and the two former own a large area of land in Girot, Sáhíwál and other estates. The outstanding debts of Sardár Mubárak Khán were paid off by means of a loan from the Kalra estate, but the family are bad managers, and have applied to be taken under the Court of Wards.

The Biloch family of Khusháb.

Another family of Biloches held independent sway in Khusháb until they were swallowed up by Maháràja Ranjít Singh, as described in section B. The head of the family is now Sardár Bahádur Khán, son of Sardár Allahjawáya Khán, who holds a life *muáfi* of Rs. 81 and is a *zaildár* and one of the members of local bench of Honorary Magistrates. He has great influence in Khusháb and its neighbourhood and is President of the Municipal Committee and a useful member of the District Board. His brother Sardár Fateh Khán was a Rissáldar in the 37th Cavalry, and the latter's elder son holds a commission in the 53rd Camel Corps, while his younger son is a Ressaldár of the 37th Cavalry.

The Sayads of Shahpur.

Before the conquest of Maháràja Ranjít Singh the Sayad family of Shahpur held practically independent sway over the town of Shahpur and a tract in its neighbourhood. The descendants of Fateh Shah hold in ancestral shares a perpetual *jágír* of Rs. 341 in Bunga Ichhral and own about half the area of the Shahpur estate. The present head of the family is Sayad Najaf Shah, who is a *zaildár* and a member of the Notified Area of Shahpur City and the District Board.

*The Sardár died in May 1916. His eldest son Sardár Abdur Rahmán Khán is a Jamadár of the 15th Lancers, and at present in Mesopotamia.

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Leading families—The Díwán family of Bhera.

An account of the Díwán Sáhni family of Bhera is given in Massy's "Punjab Chiefs," Volume II, page 197. Members of the family held good posts under the Sikhs and shared their defeat at Chilliánwála. They own some 700 acres by inheritance, and have purchased 1,800 acres of valuable State lands near Bhera. The present head of the family is *Díwán Jawáhir Mal who is Honorary Magistrate and Sub-Registrar for the Bhera Tahsíl. He did excellent service for years as manager of the Kálra Estate under the Court of Wards and was rewarded with a grant of land on the Chenab Canal. He has always been considered intelligent, trustworthy and useful and was made a Díwán Bahádur in 1898. His brother, Díwán Lakhmi Dás, is a retired Extra Assistant Commissioner as was his cousin Díwán Kirpa Rám.

Díwán Ganpat Rái, who is the representative of the elder branch of the family, is an Honorary Magistrate; his brother, Díwán Daulat Rái, has the title of Díwán Bahádur and has recently been elected a member of His Honour the Lieutenant-Governor's Legislative Council, representing the municipalities of the Rawalpindi Division, in which he is one of the best known criminal lawyers.

The Lamba family.

Sardár Gián Singh, son of Sardár Attar Singh Lamba, of Kila Attar Singh in the Gujrát District ("Punjab Chiefs," Volume II, page 145) has no connection with this district except that he holds in perpetual *jágír* the estate of Naushahra in the Salt Range, value Rs. 5,082.

Awán families.

It is characteristic of the Awáns, who are both democratic and mutually jealous, that none of them should be generally recognized as socially outstanding. Perhaps the best known are (*a*) the descendants of Malik Allahyár Khán, of Uchháli, one of whom, Malik Karam Iláhi, is a very hard-working *zaildár*; (*b*) the descendants of Malik Muqarrab Khán, of Kufri, of whom Ahmad Khán is *zaildár*, Sajawal Khán is a retired Rissaldár of the 58th Camel Corps and a "Bahádur" (Order of British India, 2nd class), and Buland Khán has recently been given the title of Khán Sáhib for distinguished service in the matter of recruiting; (*c*) the descendants of Malik Munda, of whom Muzaffar Khán is *zaildár* of Khabakki, and Sarfaráz Khán, a noted tent-pegger, is *zaildár* of Jaba; (*d*) the Maliks of Kund, of whom Sultán Ahmad, *zaildár*, is the present representative; and (*e*) Fateh Khan, of Kandan, near the boat-bridge, who performed usefully at the time of the Mutiny, and enjoys an *inám*.

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*Died on 5th September 1916.

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Population.
Grantees of State land.

Apart from the holders of 'squares,' many of whom are members of distinguished families, there are a number of gentlemen of note from other districts, who have held land from Government in this district for many years. Nawáb Ata Muhammad Khán, Kháqwáni, of Dera Ismail Khan, formerly British Agent at Kábul, was granted 2,000 acres in proprietary right, and over 3,000 acres on lease, at, or near, Nawábpur. He associated his brother, Sardár Ghulám Muhammad Khán, with himself, and their descendants have now succeeded to the estate, which consists of the villages of Islámpur and Nawábpur, and a half share in the Meknánwála Canal. The Sardár's descendants have purchased their share of the leased area, but the Nawáb's descendants are still lessees. The son of Sardár Tára Singh, of Ráwalpindi, who accompanied Sir Douglas Forsyth's Mission to Yárkand, owns about 1,000 acres of irrigated land at Tárasinghwála, near Bhera. Khán Abdur Rahmán Khán and Muhammad Nawáz Khán, Isa Khels of the Miánwáli District, have purchased a valuable property of 4,475 acres at Jalpána, in the Shahpur Tahsíl, irrigated by their private canal. Honorary-Captain Risáldár-Major Muhammad Amín Khán, son of Sardár Bahádur Risáldár Muhammad Salim Khán, of Pesháwar, holds grants of good land south of Shahpur, at Salímabad and Amínabad, for meritorious military services. A family of Shahzádas, grandsons of Shah Shuja of Kábul, hold on lease a grant of 1,200 acres of irrigated land at Shahzádpur near Shahpur. Similar grants are owned by the descendants of Subedár-Major Pír Shah, Risáldár Hari Singh and Risáldár Sher Singh.

Descent of *jágírs*.

The rule of primogeniture has been declared by notification under Act IV of 1900 to exist in respect of the *jágírs* of (1) Sardárs Muhammad Charágh Khán, Fateh Khán, and Lashkar Khán, Baloches of Sáhíwál; (2) Malik Khán Muhammad Khán, son of Malik Sher Bahádur Khán, Tiwána, of Sherpur; and (3) Malik Dost Muhammad Khán, Tiwána, of Mitha Tiwána The younger brother of Malik Khán Muhammad Khán has also signified his acceptance of the rule, but a formal notification has not yet been published. Malik Malik Khán of Mitha Tiwána has refused to accept the rule for his family, but the eldest son is given a double share. The Lamba family, who hold the *jágír* of Naushehra, also refuse to recognize the rule. Malik Muhammad Sher, Tiwána, has, apparently, not yet expressed any opinion as to his wishes.

Religions.

As regards the main religions, the statistics are unusually clear in this district. There can be no doubt as to whether a man is a Musalmán or not, for if so, he will be circumcised, will

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Religions.

repeat the *Kalima*, worship in a mosque, and pray towards Makka. There is more doubt as to whether a man has rightly classed himself as a Sikh, and the Sikhs in this district, who number 33,456, may be included for purposes of general comparison among the Hindús. The number of persons who have been included in the Hindu total, because not distinctly non-Hindús, is only 4,838, or less than one per cent. of the total population. Of these 119 are Kesdhárís and Sehjdhárís who are probably more nearly Sikh than Hindu, and the remainder are impure castes—Lálbegi (1,689), Bála Sháhi (2,755), and Sánsi (275).

Mr. Wilson anticipated that these low castes would be rapidly converted to Islám, owing to the social disabilities under which they laboured. This has come to pass ; at last settlement there were 4,523 members of the Chúhra, Lálbegi, Bála Sháhi, and Sánsi religions; the Chúhras are now recorded as either Lálbegi or Bála Sháhi and, although the total number has increased, it must be borne in mind that most of the existing number have come to this district since 1901. These immigrants are being converted with considerable rapidity to Presbyterianism.

The proportion per cent. of total population returned as belonging to the chief religions at successive censuses is as follows :—

Census of	Percentage of total population returned as				Total.
	Hindu.	Sikh.	Musalmán.	Other.	
1855	17·2	...	82·8	...	100
1868	14·5	0·9	82·8	1·8	100
1881	14·0	1·1	84·9	...	100
1891	13·4	2·0	84·6	...	100
1901	13·0	2·4	84·5	·1	100
1911	10·6	4·9	83·3	1·2	100

The apparent gain to Sikhism at the expense of Hinduism is of course partly due to the incursion of colonists from the Central Punjab, but is also to a great extent a mere matter of classification, the distinction between the two religions being omewhat fine.

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Religions.

The distribution by tahsíls is now as follows:—

	Hindús.	Sikhs.	Musalmáns.	Christians.
Bhera ...	11·3	3·3	85·1	·3
Shahpur ...	11·5	4·7	83·7	·1
Khusháb ...	7·5	3·6	88·8	·1
Sargodha ...	12·3	9·2	72·9	5·6

In Bhera, Shahpur and Khusháb the percentage of Musalmáns is in each case about 1 higher than it was at settlement so the decrease in the figures for the district as a whole is entirely due to the advent of Sikh colonists. The increase in the number of Christians is also most marked in the Colony area; it may be remarked that whilst the "others" of 1868 would now be classed as Hindús, the "others" of 1911 are practically all Christians.

Musalmáns.

Of the whole population of the district 83 per cent. are Musalmáns, and it may be said that except the money-lending and trading classes (Khatri, Arora, Sunár) and the Brahmans, the whole indigenous population profess Islám. Of the Musalmáns again 96 per cent. call themselves Sunnís, but probably the great mass of them do not know the difference between Sunni and Shiah. All Musalmán males are circumcised, repeat the *Kalima*, pray in mosques according to the Muhammadan formula with their faces towards Makka, marry by *nikáh* and bury their dead, and all look upon Makka and Madína as holy places of pilgrimage, though very few in this district have actually seen them. The great mass of the agricultural and menial classes, except in the Salt Range, are very lax in their observances, seldom go through the form of saying prayers, and are ignorant of the tenets and principles of the religion they profess. The Awáns as a rule are much stricter than their neighbours, especially in keeping the fast of Ramzán and in saying their prayers at the five prescribed times, *viz.*, *namázvela*, *peshi*, *dígar*, *namásha* and *khuftán*.

The Shiahs.

The Shiahs have increased in numbers from 9,580 in 1891 to 20,109 in 1911, but still form only $3\frac{1}{2}$ per cent. of the Musalmáns in this district. They are chiefly found in the neighbourhood of Shahpur, Sáhíwál, and Girot. They are mostly Sayads, Kureshís and Biloch. Their tenets are those described in Section 283 of Mr. Ibbetson's Census Report, and the chief difference between them and the Sunnís seems to be that they consider Karbala a sacred place as well as Makka and Madína, add to the *Kalima* a clause "*Alí Wali Ullah*" (Ali is the Vicegerent of God), keep their hands at their sides during prayer instead of

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crossing them in front like the Sunnís, say "God is great" five times instead of four at a funeral, and carry out the *tázias* with lamentation during the first ten days of the Muharram.

Ahmadís.

There are 905 Ahmadís, who are followers of Mirza Ghulám Ahmad of Kádián; the Mirza, who died in 1908, claimed to be both the Mahdi and the Messiah promised to Muhammadans and Christians, as well as an *Avatár* of the Hindu deity. The appeal of this religion appears to be, at least partly, therapeutic.

Ahl-i-Hadís.

The sect which is variously known as Wahábi, Mawáhid, Muhammadi, or Ahl-i-Hadís numbers 261 adherents, and is a reforming sect whose attitude is what in England would be called Evangelical.

Hindu sects.

The total number of persons classed as Hindús is 72,695 or 10½ per cent. of the total population, but of these 4,719 belong to aboriginal or low caste religions not properly Hindús, and the number of true Hindús, including Kesdhári and Sahjdhári Hindús is 67,976, or 10 per cent. of the total population. Of these 31,026 are Aroras, 14,583 are Khatrís, 1,555 Bhátia Khatrís, 6,181 Brahmans, 288 Jogís, 4,532 Chúhras, 3,421 Sunárs, 2,428 Bázígars, and 1,529 Chamárs. That is to say, the Hindús of the district are practically all either traders, or addicted to religious or menial service.

The principal sects as recorded at the last census are—

Sect.	*Number of persons.*	*Percentage of total Hindús.*
Sanátan Dharm ...	63,790	94
Arya ...	2,205	3
Rámdásia ...	1,062	2

Under the head of Sanátan Dharm are included every kind of approximately orthodox Hindu, except those who profess to belong to some separate sect. No distinction was made in the case of Vishn Upásaks, Shiv Upásaks, and Devi Upásaks, who numbered 23,418, 3,043, and 1,157 respectively in 1891; and it would also seem that practically all the Nának Panthi Hindús, who numbered 12,539 in 1891, are now returned as Sanátan Dharmists or Sahjdhári Sikhs. Some idea of the vagueness with which the Hindús are classified may be formed by considering that at last settlement only 568 persons claimed to belong to the Sanátan Dharm sect. It is manifestly unprofitable to attempt to define a term capable of such elastic application. The only possible meaning of the term as now used is "any person professedly Hindu, who is not subsumed under some

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distinct sect." The main distinctions between the principal groups were thus described by Mr. Wilson, but it must be borne in mind that comparatively few Hindús in this district adhere rigidly to the worship of one God :—

The Vaishnau Hindús.

The Vaishnaus, Vishnos, Vishn Upásaks, or worshippers of Vishn take their name from the god Vishnu, the preserver of the universe, who is of all the gods of the Hindu Pantheon by far the most worshipped in this district, whether in his own name, or in that of one of his incarnations. His worshippers may be considered as the orthodox Hindús of this part of the country and probably most of those who returned themselves as of no sect at all are really worshippers of Vishnu. The holy places of the Vaishnaus are those of the great body of Hindús throughout India, *viz.*, Jagannáth, Dwárkanáth, Bindrában, Mathra, Gaya, the Ganges, Hardwár, Rámeshar, Pryág and Káshi. Their sacred books are the four Vedas, the Vishn Purán, the Rámáyan, Mahábhárat, Bhágwat Gíta. The Vaishnaus worship in temples the stone image of Vishnu in human shape (many of them also worshipping images of Shiv and Thákur), and the strict among them eat only food cooked by themselves, abstain from eating flesh, onions and garlic or drinking spirits, and revere the Brahman and the cow, but many Vaishnaus in this district are by no means strict in such matters. They wear the sacred thread (*janju*) and scalp-lock (*bodi*), marry by the form of walking round the sacred fire and burn their dead, throwing the ashes into a river, and sending a small portion of them to be thrown into the Ganges. The Vaishnaus are chiefly Arorás, Khatrís and Brahmans, and are mostly found in the Shahpur and Khusháb Tahsíls. The sect is said to be decreasing in numbers and importance.

The Shiv Upásaks.

The Shiv Upásaks (3,043, found in all three tahsíls) are the worshippers of the god Shiv, and are also called Shivi or Shiv Panthi. They are chiefly Khatrís and Brahmans, and worship the god Shiv under the form of a stone pillar or *ling* in the pillar-like temple built for it, called *shivála,* by offering water, flowers and leaves, ringing bells and singing hymns. They use rosaries (*mála*) of the fruit called *rudrásh.* They eat flesh and drink spirits. Their sacred books are the Shiv Purán and Uttam Purán, and their most sacred place is Benáras (Kási). Worshippers of Shiv are said to obtain salvation and freedom from the effects of their sins by dying there on the banks of the holy Ganges which is said to flow from Shiv's matted locks.

The Devi Upásaks.

The Devi Upásaks (1,157, chiefly in the Shahpur and Khusháb Tahsíls), or worshippers of the goddess Devi, are chiefly Sunárs, Khatrís, Jogís, Sanyásís, &c. Their sacred books are the Devi Purán, a part of the Márkanda Purán, Chandi Páth and the Purán Sahasarnám, and their places of pilgrimage Jowálamukhi in Kángra, the Bindhya Hills, Káli Devi, near Calcutta, and Vishno Devi in Kashmír. It is said that the Emperor Akbar endeavoured to extinguish the ever-burning fire of Devi at Jowálamukhi, but finding his efforts unavailing, took off his shoes and begged the goddess' pardon. The worshippers of Devi are divided into two sects :—(1) the Vaishno Devi who abstain from flesh and wine, and (2) the Káli worshippers who do not. They worship the image of Devi in temples, revere Gaur Brahmans, and pay special attention to sacrifices by fire (*hom*), keep fast every fortnight and on the Monday break their fast by eating food cooked on the Sunday night and

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lighting a flame worship Devi. They especially keep a fast (*Ashtami*) half-yearly in Asauj and Chait, at the Asauj fast on the day of the new moon after the completion of the annual commemoration of the dead (*sráddh*), they sow barley, water it and keep a lamp lighted by it, and then on the eighth day cut it and light a sacrificial fire (*hom*), breaking their fast next day. This annual fast is called the *naurátara*, and this and the other half-yearly fasts are the special days of pilgrimage, when the worshippers gather at the holy places, sing hymns and make their offerings. The sect is said to be on the decrease.

The Sanyásís.

The Sanyásís (22, found chiefly in Bhera Tahsíl) also especially worship Shiv. They are a sect of devotees recruited from Khatrís, Brahmans, &c. They do not marry, but few of them abstain from flesh and spirits. They do not wear the sacred thread or scalp-lock, some wearing the hair long and some shaving the head entirely. They do not burn their dead but bury them or throw them into a river that they may be of use to living creatures. They gather in great numbers at the *kumbh melas* held every eleven years on the banks of the sacred rivers They are said to have greatly multiplied in the time of Shankar Acháraj who re-established the old religion, but in this district at least are rapidly decreasing.

The Jogís.

The Jogís (60, chiefly in Bhera Tahsíl) are another body of religious devotees who especially worship Shiv, Bhairo, and Devi. The Jogís of this neighbourhood derive their origin from Guru Gorakhnáth, said to have lived 1,800 years ago, whose chief monastery is now at Tilla, in the Jhelum District, an important offshoot being perched on the top of the isolated Kirána hill in this district, which is said to have been carried there from the Tilla hill by one of Gorakhnáth's disciples. The Jogís do not marry, but are recruited from Khatrís, Aroras and Brahmans, one common mode being that a childless man promises that if the Jogi can procure him male children he will give him one as a disciple. They do not abstain from flesh and spirits, do not wear the sacred thread and scalp-lock, but wear ropes of black wool, and many of them (hence called *kanpháte*) wear in their ears large rings of coarse glass or wood; those who do not, are called Augar. They bury their dead in a sitting position. Their sacred books are the Veds, the Bhágawad Gíta, &c. The sect is said to be decreasing. The monastery of Koh Kirána received large grants of land revenue from the Sikhs in this district, part of which were confirmed in perpetuity by the British Government.

The Bairágís.

The Bairágís (29), whose name implies that they have given up the cares and pleasures of the world, are a sect of

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devotees who do not marry but are recruited from all Hindu castes. In this district, they usually belong to one of two orders, the Rámanandi and the Nimánandi. Both orders burn their dead, abstain from flesh and spirits, and altogether follow the orthodox Hindu religion more closely than the Jogís. The Rámanandís worship Rámchandr, are followers of Rámanand, study the Rámáyan, consider Ajodhya and Rámnáth as sacred places of pilgrimage, while the Nimanandís worship Krishn, Rádha, and Baldeo, are followers of Nimanand, study the books about Krishn, and look upon Mathra, Bindrában, and Dwarkánáth as sacred places. They are said to go on pilgrimage to Dwárkánáth, and there have the impression of the metal foot-marks of Krishn stamped red-hot on their arms as a means of securing salvation from their sins. Both sects hold a great feast on the death of a fellow-devotee and also on the Rámnaumi at the end of Chait, the incarnation day of Rámchandr, and on the eighth of Bhádon, the incarnation day of Krishn.

The Udásís.

The Udásís (21) follow the precepts of Bába Siri Chand, son of Guru Nának; they wear salmon-coloured clothes, and burn their dead.

The Aryas.

The Aryas (2,205) are found mainly in the large towns, where they have established small societies. The founder of the sect was Dayánand Surasti, of Guzarát, who endeavoured to restore the primitive simplicity of the Hindu religion and to strip it of the superstitious beliefs and ceremonies with which it has become encrusted. The sect comprises all castes of Hindús, but is chiefly composed of educated men, many of whom have some knowledge of English and Sanskrit. They acknowledge the authority of no sacred book, except the Veds, and especially deny the authority of Puráns; they hold that no reverence should be shown to Brahmans and that there are no sacred places of pilgrimage, and forbid idol-worship and offerings to the dead, holding that there is one true God who is spirit and should be worshipped in spirit only. Their importance is much greater than their mere numbers would give, for they are mostly educated men, many of them in good positions, and as a rule

and somewhat aggressive in their endeavours to convert their

fellows. In the towns they are establishing meeting-houses and

schools of their own which have a considerable effect in keeping

them together as a body and spreading their tenets.

They have established a High School at Bhera, which is

apparently about on a level with the Government School in the

matter ...

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Hindu sects – The Rámdási.

The Rámdási (1,062 in all three tahsíls) are a sect of Nánakpanthís, closely connected with the Dhirmalais, Dhirmal and Rám Dás having belonged to the same family. The large village of Chak Rámdás belongs to Khatrís of this family, who are revered as Bháís by a large following, chiefly of Khatrís and Aroras. Their tenets, &c., are the same as those of the Nánakpanthís.

Minor sects.

Among the minor variants of Hinduism which were noticed by Mr. Wilson and have now probably been included under the Sanátam Dharm may be mentioned the Dhirmalis (mostly Aroras, who follow one Dhirmal, a *fakír* of the days of Guru Hargobind), the Gosáíns, the Sewa Panthís (mostly Aroras of Shahpur Tahsíl, who follow Sewa Rám, a disciple of Kanhaiya Lál, one of the personal followers of Guru Teg Bahádur ; they are usually rope-makers by occupation, and specially devote themselves to attendance on travellers), the Láljís (a sort of Bairági, whose head-quarters are at Dhiánpur, in Gurdáspur District), the Múla Santís (who follow a Gaur Brahman of Sulímán, in Chiniot Tahsíl, reputed to have spent 12 years worshipping in a hole he had dug), the Dádúpanthís (who follow a disciple of Rámanand, and are closely allied to the Rámanandi Bairágís), and the Jinda Kaliyán ke-Sewak ; these last follow Jinda, a *fakír*, and Kaliyán, a Brahman, who were great friends, living at Masan, in the Jhang District, and are said to have been honoured by Guru Gobind Singh. They make a pilgrimage to the tombs of Jinda and Kaliyán at Masan at Dasahra time.

The Diál Bhawánpanthís.

Of greater local interest are the Diál Bhawánpanthís who are a sect of Vaishnav Hindús, followers of Diál Bhawan a cloth-seller of Girot in the Khusháb Tahsíl, whose attention was turned to religion by an example of second sight (*ilhám*) by a Patháni with whom he was staying. The head-quarters of the sect are at the Rámsar tank at Girot where a great festival takes place on Baisákhi every year. His followers are chiefly Aroras and Khatrís of Shahpur and the surrounding districts, and their tenets, etc., are those of Vaishnav Hindús. They are initiated at the Rámsar tank where they are taught special prayers and have their heads shaved. Some wear the sacred thread, others do not.

The Kabírpanthís.

There are 206 Kabírpanthís in the district who reverence Kabír, one of the disciples of Rámanand Bairági ; the main feature of Kabír's teaching appears to have been his insistence on the unity of the Divine, whether He be called Rám or

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Allah: the best-known fact of his career is his upbringing by weavers, and his adherents are mostly members of that caste.

Minor sects—The Shamsís.

The Shamsís, who number 205, are believers in Shah Shams Tabrez, of Multán, and his living representative, the Aga Khán, of Bombay. They are mostly Sunárs, and are said to rely on their patron saint for assistance in the gentle art of mixing alloy with the precious metals in such a way as to escape detection.

Other sects.

The only other Hindu sects found in this district are the Ods (38), who reverence Baksh Gawa and Gházi Mián (two of the Panjpiria Saints), and observe ordinary Hindu customs, and the reformed sects of the Brahmo Samáj (73), Dev Dharm (7) and Rádha Swámi (1[illegible]). The Brahmos have a Samáj at Bhera; they are monotheists, who insist on the importance of personal righteousness as opposed to liturgical and social orthodoxy. The Dev Samáj was originally similar in intention, but has come to regard its founder, Pandit Satyánand Agníhotri, as an embodiment of the deity. The Rádha Swámi sect has evolved from professedly scientific data an esoteric philosophy not unlike that of orthodox Hindúism.

Sikh sects.

The total number of Sikhs is 33,456 and these include 16,027 Aroras, 7,005 Jats, 3,9[illegible]6 Khatrís, 1,144 Mazhbís, 1,04[illegible] Khálsa Sikhs, 599 Rájpúts, 501 Bhátias, and miscellaneous members of artizan, menial, and priestly castes; less than a third of the total number are engaged in agriculture. The distribution by sects is as follows:—

	Kesdhári.	Sahjdhári.	Sanátam Dharm.
Hazúri	1,825	...	...
Nánakpanthi ...	126	512	22
Sarwaria	223	13	...
Unspecified ...	20,879	9,729	...
Others	121	6	...
Total	23,174	10,260	22

Hazúri.

The Hazúri is not so much a sect as an order, and consists of followers of Guru Gobind Singh who have visited the place of the Guru's demise—Hazúr Sáhib in Hyderabad, Deccan—and been initiated there. They are supposed to wear only yellow or blue garments, and often refuse to eat food cooked by others.

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Sikh sects Sarwariás, Nának-panthís.

The Sarwariás are followers of Sakhi Sarwar, and are distinguished by their insistence on '*halál*' instead of *jhatka* as a means of slaughtering animals, and their observance of Thursday for giving of alms.

Of the Hindús only 49, and of the Sikhs 660, have returned themselves as belonging to the Nánakpanthi sect, *i.e.*, as followers of Bába Nának, the first Sikh Guru. (With these may be taken the 119 returned as Hindu Sikhs.) There is no clear distinction between these two classes, nor indeed is the distinction between Nánakpanthís and orthodox Hindús on the one hand or Sahjdhári Sikhs on the other, at all clear. The fact is that the Aroras and Khatrís of this neighbourhood are as a rule very lax in their religious ceremonies and doctrines and have been very much influenced by the liberal teachings of Guru Nának and his followers. Those who are most under the influence of the Brahmans and most particular about carrying out the ceremonial observances of the Puráns, call themselves Vaishnau Hindús. Those who have been most influenced by the teaching of the Sikh Gurús and of their sacred book the Granth, and especially those who have adopted the Sikh religion as taught by Guru Gobind Singh, call themselves pure Sikhs. Other again while they revere the Granth yet revere Brahmans also, worship idols now and then, do not abstain from tobacoo and shave their heads. Some of these call themselves Nánakpanthi Sikhs and others Nánakpanthi Hindús, so that there is no clear line of distinction between them. Thus Nánakpanthi in this district means little more than a lax Hindu.

It is interesting to note that in 1891 there were no less than 12,539 Hindús and 9,016* Sikhs returned as Nánakpanthís as well as 405 Hindu Sikhs. It is clear that even those who followed most of the teaching of Guru Gobind Singh were content at that time to ascribe their main allegiance to the first Guru. Now that the distinction between the various degrees of Sikhism has come to have some political and ecclesiastical importance, a large number of the Sikhs have definitely ranged themselves on the side of the sect furthest removed from Hindúism.

Religion of menials and Jangal tribes.

The Lál Begís (1,689) and Bála Sháhis (2,755) are probably all Chúhra by caste. They together make up 7 per cent. of the Chúhra caste. The great mass of the Chúhras in this district belong to the Musalmán religion, are called Musallís, and do not eat animals that have died a natural death. These Musalmán Chúhras are treated as true Musalmáns by the peasant popu-

**i.e.*, 92 per cent. of the total number of Sikhs.

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Religion of menial and Jangal tribes.

lation who do not refuse to eat food or drink water from their hands. But a considerable number (4,962) of the caste have not been circumcised, and do eat carrion. They are still called Chúhra, and have their own primitive religion, which consists in making simple offerings at a small shrine over which is set a flag consisting of a rag on a pole. They consider Lál Beg and Bála Sháh as Gurús and do them honour, many of them describing themselves as belonging to their sects. Lál Beg is said to have lived in the Gujránwála District. Bála Sháh or Bálmík appears to be eith r the Brahman author of the Rámayana, or a sweeper who was converted from the practice of highway robbery to preaching religion among his caste-fellows or possibly a confusion of these two personalities. It will be seen in a later paragraph that many Chúhras have embraced Christianity.

The Sánsís by tribe are 673 in number, and the Sánsís by religion are 275; apparently 367 Sánsís have returned themselves as Sháfis from an idea that Imám Sháfi authorised the eating of animals considered unclean by the orthodox Musalmáns. They have a primitive religion of their own, not unlike that of the Chúhra, but their ideas have been largely affected by the prevalence of Islám.

Mosques, temples and shrines.

Every village has its mosque distinguished by its three pinnacles, sometimes a mere *kachcha* building little better than the mud-built huts of the peasants, but generally more pretentious with at least some carved wood on its front, a slightly raised platform covered with the sweet-scented *khavi* grass, an arrangement for heating water for the ablution before prayers and a wall round the sacred enclosure. In villages of older standing, the mosque is often a masonry building with dome and minarets ornamented with painted scroll-work and some verses of the Kurán. The most imposing mosque in the district is that at Bhera, said to have been built by Sher Sháh, King of Delhi, in A. H. 947. In those villages in which several Hindús or Sikhs have settled there may often be seen a small *thákurdáwára*, *shivála*, or *dharmsála*, but it is only in the large towns that these buildings are of any size or importance.

The Musalmán peasantry generally are by no means bigoted or very particular about the forms of their religion. During an outbreak of cholera it was noticed that many men went to prayers in the mosques, who had hardly ever been inside one before and who did not know the proper genuflexions to make. A man who is attentive to the prescribed religious ceremonies is known as a *namázi*—a pious man. The number of the pious is however

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increasing, and the Awáns in particular pay great attention to the prescribed religious services and keep the Ramzán fast strictly.

Each mosque has its Imám or Ulma, who keeps it in order, teaches the village boys to repeat the Kurán by rote and conducts the service at marriages and funerals. Few of them have much learning, or much influence over the people Greater reverence is shown to holy men or saints (*fakírs* and *pírs*) and to their tombs (*khánjáh*), which are frequently to be seen surrounded by trees and brushwood, as no one dares to cut down a tree or even to carry away the fallen wood from a *fakír's* grave; and ploughs and other articles are sometimes left at such a grave for safety, the owner feeling certain that no one would dare to steal in the neighbourhood of a *fakír's* tomb These tombs are sometimes mere earthen graves, but more often a pile of stones or bricks has been erected, with a wall to enclose the grave. When a villager desires anything strongly he makes a vow (*mannat*) to present something at the tomb of some *fakír*, one of the most common offerings being a rag (*bérak*) tied to a twig of some tree above the tomb. If the prayer was for a child and has been answered, the happy mother hangs up a toy cradle (*paghúṛa*); if a cow has calved, some milk is presented at the shrine; if a stolen bullock has been recovered, the vow is paid by hanging up a halter. One *khángáh* at Ishar is famous as a place for getting toothache curéd. The sufferer comes and throws *kauri* shells down at the grave, and his pain at once ceases and does not return for as many years as he has presented *kaurís*. Mr. Wilson once saw a boy come and seat himself formally at a shrine near which he was encamped and on enquiry found that he had come there to be saved from a periodical fit of ague which was due. He gave him some quinine, and the saint did not fail his worshipper that day. At the highest point of the road from the Salt Range villages to Shahpur, above Kathwai, is a shrine (not a tomb) devoted to Gorra, the ancestor of all the Awáns of these parts. It is usual for an Awán as he passes this place on his way down into the plains to promise that if his journey is successful he will put up a stone to the genius of the place on his return. The trees around are full of such stones, and as it is not the custom for the unsuccessful to knock down any of the stones, the number of the offerings continues to increase and to prove the efficacy of such vows. It is not only dead saints who can confer favours and perform miracles by their holy powers. The Sayads of Pipli Sayadán near Girot have the power of curing the bite of a mad dog. A holy man at Sháhwála near Uttera is known as *vatta bhann* (stone-

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breaker) because he can crush stones in his hand ; he can also fell trees by a wave of his hand. When a saint has by austerity or miraculous power gained a reputation of this sort, it often descends not only to his tomb but to his sons and grandsons, who are revered as *miáns* or *pírs* though their own character may be far from saintly. Some of these *pírs* have a large following who deem it meritorious to make them presents and show them honour, and look upon them in much the same way as the orthodox Hindu looks upon his family Brahman. It is usual for the *pír* to make tours among his followers (*murídś*), receive their obeisance, enjoy their hospitality and collect their offerings. Sayads and Kureshís enjoy a similar reputation owing to their descent ; and among the Sikhs, similar offerings are made to Bedís and Bháís who come round periodically to collect them. Among the most revered *pírs* in the district are (1) Pír Satár Shah, Qureshi, of Pail in the Salt Range, a most worthy old man, who remembers conversing with Ranjít Singh, and is at least 120 years old : he is still able to pay or receive a visit without embarrassment, and to take his part in the conversation ; his only son is over 60, and his only grandson is just over 1 year old! The son has long since established his claim to wear worthily the mantle of his father ; (2) the representative of the *pírs* at the shrine of Khwája Shams-ud-dín at Siál Sharíf, south of Sáhíwál, a branch of the famous shrine at Taunsa Sharíf in the Dera Ghází Khan ; (3) Pír Bádshah of Bhera who has a large following among the Awáns of the Salt Range ; (4) the Pírs of Shah Ajmal near Girot, who are much respected by the Shiah Biloches of Jamáli, including a number of Military officers.

Fairs and pilgrimages.

When a dead saint, Musalmán or Hindu, has attained sufficient fame, it becomes usual for his worshippers to make a pilgrimage to his tomb and present some offering there. Often a particular day is fixed as the most propitious day on which to make the pilgrimage, and on that day a crowd gathers from far and near, both Hindu and Musalmán, booths are erected and a sort of "Holy Fair" carried on, religion being combined with amusement. There are numerous small gatherings of this description at shrines in different parts of the district, but the most important are those given in the following statement :—

Locality where shrine is situated or fair held.	Name of shrine.	Date and duration of fair or gathering.	Approximate attendance.
Kirána	Koh Kirána ...	15th to 17th Phágan ...	15,000
Shahpur	Sháh Shams and Sháh Muhammad.	23rd, 24th and 25th of Chet	12,000

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Fairs and pilgrimages.

Locality where shrine is situated or fair held.	Name of shrine.	Date and duration of fair or gathering.	Approximate attendance.
Girot	Diál Bháwan ..	30th Chet and 1st Baisákh	8,000
Khusháb	Háfiz Dewán ...	20th Chet	8,000
Shekhpur (adjoins Bhera) ...	Sultán Ibráhím ...	Two last Sundays in Chet and two first Sundays in Baisákh.	6,000
Hazára (on the bank of the Chenab).	Sháh Sháhamdi ...	1st Sunday in Baisákh ...	5,000
Turtípur (6 miles south of Bhera).	Pír Ahdam Sultán ...	13th, 14th, 15th of Sáwan ...	5,000
Girot	Muhammad Jamáli ...	20th Ramzán	4,000
Siál Sharíf (south of Sáhíwál)	Khwája Shams-ud-Dín.	24th Safar	3,000
Nihang (10 miles south of Sáhíwál).	Panj Pír ...	1st Mágh	3,000
Pír Sabz (6 miles south of Sáhíwál).	Pír Sabz ...	2nd Friday of Chet ...	2,000
Nabi Sháh (6 miles south-west of Bhera).	Sháh Shahábal ..	From 15th to 20th Hár ...	2,000
Bhera	Pír Káyanáth ...	15th Phágan ...	1,300
Dharema (10 miles south-east of Civil Station).	Sultán Habib ...	From 25th to end of Ramzán	1,000

The largest gathering is on the Kirána hill; at the Shah Shams fair at Shahpur town at the shrine of the ancestor of the Sayads of Shahpur, numerous booths are erected and tent-pegging, merry-go-rounds, &c., provide amusement for the holiday-makers. The Hindu fair of Diál Bháwan at Girot is considered an auspicious occasion for a Hindu boy to have his head shaved and to don the sacred thread (*janju*). At the Sultán Ibráhím fair at Shekhpur, near Bhera, held on four Sundays in spring, it is the fashion to have oneself bled at the hands of the barbers of Bhera, so that the place becomes like a shambles. This operation, performed at the shrine on these auspicious days, is supposed to protect the patient from all diseases. At a small gathering held in the Muharram at Cháwa in the Bhera Tahsíl it is usual for Nausháhi *fakírs* to have religious verses sung, the effect of which is to throw some of the hearers into a state of religious ecstasy, in

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which the patient becomes unconscious or raving. He is then suspended by the heels from a tree till he comes to his senses. But such practices are reprobated by the learned as a work of Satan.

For the Hindús Narsingh Phohár at the petrifying spring and cascade in the Katha gorge and the temple at Sakesar are places of pilgrimage and small bands of Hindu pilgrims from the East wend their way by these sacred places to others on the frontier.

Other shrines with a considerable reputation are the Nawáb Sáhib, Ináyat-Viláyet, and Bádsháh Sáhib at Khusháb; Sháh Yúsaf about 7 miles south of Shahpur; Háfiz Rahmat Ullah, north-east of the Uchháli lake; Sultán Mehdi, on the road from Narsingh Phohár to Sodhi; Sultán Ibráhím at Amb; Mahmúd Shahíd in the extreme west of the Thal; and Sakhi Muhammad Khushál, west of the Khabakki lake.

Superstitions and omens.

The Shahpur rustics are wonderfully free from superstitions, owing possibly to want of imagination. They have little dread of ghosts or goblins, though some places (*pakki jáh*) have a reputation for being haunted by demons (*jinn*) and some diseases are supposed to be caused by the patients being possessed with a devil. There are, however, lucky and unlucky days. On the 3rd, 8th, 13th, 18th, 23rd and 28th of the lunar month (called *gaddi*) the earth is believed to be asleep and the peasant will not begin to plough, or sink a well, or hold a marriage on one of those days. Tuesday is a lucky day to begin to plough, and Monday (in the hills Saturday) to begin to cut the harvest. It is unlucky to sow or to gather in the grain after the 24th day of the lunar month; and a bride should not go to her father-in-law's on a Sunday. A Musalmán will not lie down with his feet towards Makka. When a Persian-wheel at work utters a sound like a shriek (*kúk*) louder than its usual inharmonious screech, this is considered an omen of ill, and to avert disaster the owner of the well sacrifices a sheep or goat and smears the blood of its neck on the pivots of the well machinery. Other bad omens are for a cock to crow at night, or a hen at any time; for a cow to bellow or a dog to bay. Those who have to travel are careful not to drink just before starting; if a man accosts any one on the road, he will be gratified if the reply be "Ji!", and depressed if it be "Voe!" or "Hán!" To be shouted at from behind is always bad, or to be overtaken by a funeral cortège if one is wearing one's best clothes. An agriculturist dislikes meeting a Brahman. In horses exception is taken to a white star on the

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forehead or white socks (either single, or on the near-fore and off-hind feet), a black roofed mouth, or a lopsided action in raising the tail. A foal born in Sáwan and a calf born in Assu are considered unlucky. A quadruped on the roof is inauspicious. It is common to wear as protection against the evil eye (*nazar*) an amulet (*tawít*) inside which is written a charm, such as a verse from the Qurán or a square of figures so arranged as to total up to 15 in each way. This is worn on the arm, round the neck or tied to the end of the *pagri*. Bullocks, camels and horses are protected by similar amulets. In the Salt Range it is usual to erect a cairn on the spot where a man has been killed, and in some places numerous such cairns of stones mark where villagers were killed in the unsettled times before Mahárája Ranjít Singh's strong hand imposed peace on the land.

Christian sects.

The number of Christians in the district rose from 91 in 1901 to 8,616 in 1911 : this great increase must be attributed to immigration rather than conversion. The distribution by race, sex and sect is as follows :—

—	European and allied races.	Anglo-Indian.	Indian.	Total.
Male	82	26	4,757	4,865
Female	68	21	3,662	3,751
Presbyterian	14	4	8,007	8,025
Anglican	105	37	135	277
Other Protestants	13	...	155	168
Roman Catholic	10	6	122	138
Christian Scientist	6	...	..	6
Greek	2	...	...	2

The great majority of the Christian population are immigrants from Siálkot, of humble extraction. There are no exclusively Christian settlements : but 7,778 Christians are in the Sargodha Tahsíl, as against 787 in Bhera, 38 in Khusháb, and 13 in Shahpur.

Ecclesiastical administration.

The Anglican community are ministered to by the Chaplain of Jhelum ; there is an Anglican Church, dedicated in the name of St. Andrew, at Shahpur, with seats for 24 persons. The absence of a church at Sargodha is the subject of some

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comment in the district. The American Presbyterian Mission has a church, in charge of the Reverend H. D. Salik at Bhera; but in that tahsíl the Mission's influence is exercised less through the church than through the Female Hospital, which is described in Chapter III, Section J. There is another Presbyterian hospital for women at Sargodha, which is also described in Chapter III, and there is a small dispensary at Bhalwál managed gratuitously by Mrs. Sháhbáz.

The working of the Mission, as shewn in their report for 1914, is as follows :—

Number of Missionaries ...	6	Organised congregations	9
Number of Indian Ordained Ministers	10	Self-supporting congregations	7
Licentiates and students of Theology	4	Membership ...	3,928
Other church workers ...	13	Sunday Schools ...	10
Bible women	5	Membership ...	725
Colporteurs	1	Schools	17
		Membership ...	528
		Christian teachers ...	17
Total of workers ...	39	Reading Rooms ...	2

Of the 528 children attending the Christian Schools, 258 are Christian boys and 108 Christian girls. There is a Girls' Boarding School at Sargodha, and a Boys' Boarding School two miles away.

To the working of the Mission, Indians contributed Rs. 2,792 and Government Rs. 547. The Mission is at present in charge of Dr. Brown. Miss Aldridge has been a Bible-woman at Bhera Hospital for 23 years continuously.

There is also at Sargodha a Roman Catholic Priest, and a certain number of conversions from Presbyterianism to Romanism are reported.

Occupations.

In most cases a man's occupation can be inferred from his caste ; the work done by each caste has already been explained in this section. Table 17 shows how many males and females actually work at each calling, and how many persons are dependent on them. The classification is of course vague, and probably there is a good deal of overlapping. Naturally pasture and agriculture come easily first in importance, but it is surprising to find that "Industries of dress and toilet" and "Textiles" come next: in addition to the weavers, the washermen, barbers and cobblers have been included under these heads. Trade is next in importance, and not far behind are the "Beggars, vagrants, and

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prostitutes," which shows that the community is rich enough to maintain a large proportion of parasites. Next comes "transport by road," under which head come those who make their living by the hire of carts, camels, and donkeys. In practically every occupation, one worker supports two dependants.

Daily life.

The men of the pastoral tribes lead a comparatively lazy life, the demand on their labour being almost limited to drawing water for the cattle and milking the cows; but the men of the agricultural population are more or less employed in some one or other of the operations of husbandry all the year round, and this is especially the case where crops are irrigated from wells. Here in the hot season the peasant's daily life is somewhat as follows:—He gets up about 2 A. M., gives a feed to his bullocks and goes to sleep again till just before dawn (about 4 A. M.,) when he gets up, has a smoke, says his prayers if given that way, and goes off with his bullocks to work his well or plough his fields. If it is his turn to get water from the well he keeps his bullocks at work perhaps all day or all night, till his turn is at an end. If not, he unyokes his bullocks about midday and turns them loose to graze while he himself has a siesta. When the afternoon begins to get cool, he does some light work in the field, weeding, cleaning out his irrigation channels, &c. At sunset, he goes home, ties up his bullocks, milks the cows, gets his supper, has a smoke and a chat with his fellows at the gathering place (*dára*) of the village, and goes to bed at about 10 P. M. At harvest time he labours at cutting and gathering the crops all day long. In the cold weather the peasant gets up about 6-30 A. M. and the day's routine is much the same except that he works all day long, does not take a siesta, and goes earlier to bed, changing his hours of getting up and going to bed as the day shortens or lengthens. The peasant whose cultivation depends on canal irrigation, on river floods or on rain has a somewhat similar routine, except that his labour is not so constant and varies greatly according to the abundance or scarcity of moisture. In rain-irrigated tracts when rain falls every plough is taken out and the fields are alive with men and oxen taking full advantage of the welcome moisture, but when a lengthened drought occurs, the fields are deserted and the peasant finds it difficult to employ his times.

In some of the most enlightened Colony villages, the daily round has been mapped out in the most methodical way. A trumpet calls the menials to their allotted tasks and a village clock chimes the hours for the opening and closing of water channels. Such exemplary villages are, however, few.

The peasant's wife can rarely fold her hands in idleness.

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She gets up before sunrise and grinds the flour for the day's food, or, if she has a supply on hand, turns her spinning-wheel. Then she churns the milk of the night before, cleans up the house, cooks the morning meal and takes it out to her husband in the fields. On her return home she does some more spinning until afternoon, when she has to put the vegetables or *dál* on the fire, knead the flour, make it into cake and prepare it for the supper of the men-folk whose hunger must be satisfied before she herself can eat. If any time is left before going to bed she starts her spinning-wheel again, this being the employment with which the thrifty housewife occupies all her spare moments. One of the duties of the day is to fetch water for the use of the household, and in the drier parts of the district this is often a work of great labour involving as it sometimes does, in the Salt Range and the villages along its foot, the carrying of two or three large jars several miles. As the crops ripen her services are required to watch them and frighten away the birds, and in the Salt Range the women help in weeding the fields, gathering in the crops, and even sometimes in driving the plough.

The introduction of machinery, however, is tending to lighten the woman's burden of toil. In the cis-Jhelum *tahsíls* practically every village of any size has one or more grinding machines, worked by bullocks or oil-engines, and these now do much of the work formerly done by the hand-mill. In Khusháb some villages have recently started water-mills and others have had the water-supply brought much nearer to their doors. But the women's opportunities for innocent recreation are so few and their sense of responsibility is so undeveloped that it may well be doubted whether they will derive much real benefit from increased leisure.

Food.

The food of the common people is very simple, consisting, in the hot weather, of cakes of wheaten flour (*goga*) moistened with butter-milk, for which butter or *guṛ* (raw sugar) is sometimes substituted ; and in the cold weather, of *bájra* with the same accompaniments. In the richest part of the district *bájra* is only eaten for a month or two, but in the hills little wheat is eaten from Magghar to Phágun. In the colony the immigrants from the Central Punjab prefer *jowár* or maize to *bájra*. During the hot months the dough, after being kneaded, is taken to the village ovens, kept by a class called Machhís, who live on the perquisites derived from baking food for the rest of the village community ; but in the cold weather every family cooks for itself. The regular meals are taken twice a day, the first between 9 and 10 o'clock in the forenoon, and the other in the evening,

as soon as it becomes dark, the time varying with the seasons, from 6 to 8 P. M. In addition to these regular meals, in the hot weather, the remains of the previous day's food, with a little butter-milk, is taken to the men working in the field about an hour after sunrise, and parched grain is eaten in the afternoon; with the evening meal either vegetables or *dál* (lentils) is served according to the season. In the Thal, during the cold weather, water-melons enter largely into the ordinary food of the inhabitants, and the seeds are commonly parched and eaten mixed with other grain. In the colony the consumption of tea is becoming quite usual.

Dress.

The everyday dress of the male portion of the Muhammadan population living north of the Jhelum river consists of four garments—a *majhla*, a *kurta* or *chola*, a *chadar*, and a turban, or *pag*, as it is here called. The first is a piece of cloth about three yards long and a yard and a half wide, which is tied tightly round the waist, and allowed to hang in loose folds over the lower part of the body. The *kurta* or *chola* is a full-cut tunic, with large open sleeves, reaching a little below the waist, buttoned towards the left by Musalmáns and towards the right by Hindús. The *chadar* is made of three breadths of cloth, in length about as many yards, and is worn something in the manner of a plaid. Of the turban nothing further need be said than that its size depends much on the social position of the wearer, and increases with his importance; a small turban being called *patkha* and a large one *pag*. South of the Jhelum the *kurta* used to be unusual, and in the Bár was never seen; "indeed," (Mr. Wilson noted) "the man who would wear such a garment there must be possessed of more than ordinary moral courage to endure the jokes that would certainly be made at his expense." Of course, at the present time, fashions in the Bár are very similar to those to which the colonist has been accustomed in his old home. The material of which this simple clothing is made is the ordinary course country cloth, except that along the rivers, especially the Chenab, coloured *lungís* are often used as *majhlas*. The Kaleárs, the chief camel-owners of the Shahpur Tahsíl, are also much given to wearing *lungís*. The dress is completed by the shoes (*jutti*) or in the hills by sandals (*kheri*). The Hindús to a great extent follow the fashions of the Muhammadans among whom they live in regard to the use of the *kurta*, but their mode of tying the turban is somewhat different, and the *dhoti* replaces the *majhla*, the difference between these garments being in the manner of putting them on. The Muhammadan women also wear the *majhla* (tying it somewhat differently to the men),

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and this is usually a coloured *lungi*. Their other garments are two, the *choli* or *chola* and the *bhochhan*. The former has short sleeves, and fits closely round the breasts; the *choli* is short and leaves the waist bare; the *chola*, which is now more fashionable, comes below the top of the *majhla*. The *bhochhan* is a piece of cloth about three yards long and one and a half wide worn as a veil over the head and upper part of the body, from which it falls in graceful folds nearly to the feet behind. The *choli* is generally made of strips of many-coloured silk, the *bhochhan* of a coarse, but thin description of country cloth called *dhotar*, sometimes dyed but more often plain. To this the Thal is an exception, where veils of many colours, the patterns formed by spots disposed in a variety of ways on a dark ground, are the rule. In the hills coloured garments are scarcely ever seen. The Hindu women of the Khatri class in towns and in villages colonized from Siálkot wear full trousers called *suthan* made of a striped material called *súsi*, the ground of which is usually blue. Over the head is thrown a *chadar* of coarse cloth, prettily embroidered in many-coloured silks called *phulkári*, and round the upper part of the body is worn a loose *kurta* of silk or muslin. The women of the Arora class are clothed like the Khatránís, except that, in place of the trousers, they wear a skirt called a *ghaggra*, and sometimes the *majhla*. It may be added that it is the invariable rule, even among Muhammadans, that a girl shall wear a *kurta* and plait the two front tresses of her hair until she is married (*chunda*). A married woman wears her front hair in two rolls, not plaits, and a widow wears her hair simply smoothed down on her head.

There are, of course, many departures from these simple types of apparel, especially among the wealthier inhabitants. The highest grades of society frequently wear Jodhpur breeches and sporting coats of non-actinic, or other tailor-cut, cloth; or, perhaps Kashmiri *chogas* or broad-cloth frock coats with white *paijamas*. Even ordinary folk affect the military great-coat, and the short, tight-waisted jackets, with balloon sleeves, which were much worn by ladies in England about 1897, seem to have found their way in large numbers into this district. Waistcoats of all possible materials and colours are also much in evidence.

Ornaments.

The ornaments worn by the people are chiefly of silver and are usually of very rough workmanship, though some of them are not inelegant in design. A sheet containing drawings of all the ornaments in general use, with a brief note under each, giving the name by which it is known, will be found with the maps attached to Captain Davies' Settlement Report. It is

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not usual for men to wear any ornament except a ring (*mundri*) sometimes with a seal on it, and perhaps an amulet (*táwíz*) on the neck or arm. A few wear ear-rings, but these are considered effeminate.* The common ornaments worn by women are the anklet (*kari*), necklet (*hassi*) with pendant (*lár*), nose-ring (*nath*) and other ornaments for the nose, *viz.*, the *bulák*, which is worn in the partition between the two nostrils, the *laung*, a dove-shaped ornament stuck through the side of the nostril, and the *tíla*, a smaller ornament similarly worn on the other side of the nose; ornaments for the ears, *viz.*, the *vála*, a large ear-ring, *váli*, a small ear-ring, and *bundde*, ear-ring drops, worn by unmarried girls; ornaments for the forehead, *viz.*, the *dáuni*, a broad ornament worn over the hair, and the *tikka*, a round jewel worn in the centre of the forehead; ornaments for the arms, *viz.*, the *bohatta*, an armlet worn just under the shoulder, the *tád*, a solid armlet worn above the elbow, bracelets (*chúri*) and bangles (*kara* or *kangan*), finger-rings either plain (*chhalla*), broad (*vehr*) or ornamented (*mundri*), and amulets (*tawitri*) worn round the neck.

Manners.

The rules of etiquette are not very well defined, and differ greatly from those in vogue in European countries. Women are not treated with such deference, and are ignored as much as possible out-of-doors. When a husband and wife are walking together, she follows at a respectful distance behind. A woman should not mention the name of her husband or of his agnates older than her by generation. Words denoting connection by marriage have become so commonly used as terms of abuse that they are not often used in their proper sense; and a man generally speaks of his father-in-law (*sauhra*) as his uncle (*chácha*). It is shameful for a man to go to his married daughter's house or take anything from her or her relations; on the other hand a son-in-law is an honoured guest in his father-in-law's house. When a married woman goes to visit her mother, it is proper for the women of the family, both on her arrival and departure, to make a great lamentation, and lift up the voice and weep.

When friends meet, they join but do not shake hands or each puts out his hand towards the other's knee; or if they are very great friends, they embrace each other, breast to breast, first one side and then the other. If a man meets a holy person (*pír*) he touches the latter's feet by way of salutation. Should acquaintances pass each other, one says "*Salám alaikum*" (peace

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be on thee), and the other replies "*Wa alaikum ussalám*" (and on thee be peace). They then enquire after each other's health, the usual question being "Is it well?" (*khaire*) and the answer "fairly" (*val*) or "thanks (to God)" (*shukr*). When a visitor comes to the house he is saluted with a welcome (*ámi* or *á jí áeá*) and answers "blessings be on thee" (*khair hovi*). The use of chairs and stools is becoming more common, but it is usual for a peasant when resting either to sit on his heels (*athrúha*) or to squat on the ground cross-legged (*patthalli*), or to sit on the ground with his arms round his knees, or with his *chadar* tied round his waist and knees (*goth*) to support his back.

Gestures.

Some of their gestures are peculiar, although, as in Europe, a nod of the head means "yes" or "come," and a shake of the head means "denial." Thus a backward nod means "enquiry." A click with a toss of the head means "no"; jerking the fingers inwards means "I do not know"; holding the palm inwards and shaking the hand means "enquiry"; holding the palm outwards and shaking the hand is a sign of prohibition; holding up the thumb (*thutth*) means "contemptuous refusal"; wagging the middle finger (*dhiri*) provokes a person to anger; and holding up the open palm is a great insult. In beckoning a person the hand is held up, palm outwards and the fingers moved downwards and inwards.

Houses.

The dwellings of the common people throughout the district consist of one or more rooms called *kothas*, with a court-yard in front. The court-yard, named *vehra* is often common to several houses. The rooms are built ordinarily of clay, gradually piled up in successive layers and then plastered. The roofs are invariably flat, and are used as sleeping places during the hot weather. In the court-yard is generally seen a manger (*khurli*), and a house in which the cattle are sheltered from the cold in the winter months, which structures (called *satth* in the Bár where they are very capacious) consist generally of four walls covered with a thatch. The only exceptions to this general description are the habitations of the people in the Thal and in the hills. The former are sometimes composed of nothing but wood and grass, and the latter are built entirely of boulders cemented together with clay; as, however, walls of this kind have little or no power of resisting rain, the roof is always supported on strong posts driven into the ground, the walls acting merely as a defence against the weather. As a rule the houses of the peasants are built for them by the village carpenter (*dharkhán*) or potter (*kubhár*), who receive their food while the work is going on, and a present of clothes or money (commonly 3 or 4 rupees and a

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turban when it is finished; payment for work at a fixed rate is only made by Khatrís and other non-proprietors. The timber used for roofing is usually *kíkar* or *ber* in the plains, and *kau* in the hills, the first two being usually the produce of *zamíndárs'* own fields; beams of deodár or shísham are only to be seen in the houses of the rich.

Furniture.

The requirements of a population low in the scale of civilisation are few, and their furniture consists exclusively of necessaries. First there are the receptacles for storing grain of various sizes from the dimensions of a small room to those of a beer barrel; these are made by the women of the houses, of fine clay mixed with chopped straw. The larger kind, called *sakár*, are square, and hold from forty to fifty maunds; the smaller description (*gehi* or *kalhoti*) are cylindrical in form, and hold but a few maunds Next are to be seen some spinning wheels (*charkha*), as many as there are women; apparatus for churning milk (*riṛk*); an instrument for cleaning cotton (*velna*); a number of circular baskets with and without lids, made of reeds (*khári, taung*, &c), in which are kept articles of clothing and odds and ends; trays of reeds (*chhaj, chhakor*) used in cleaning grain; a goat-skin water bag (*kuni*) used on journeys, or when employed in the fields at a distance from home; a set of wooden measures for grain (*ṭopa, paropi*, &c.); a leather bag (*khallaṛ*) for carrying flour when away from home; a variety of cooking vessels some of iron* and others of a composition resembling bell-metal; a number of earthen pots and pans in which are stored grain, condiments and other articles of food; a coarse iron sieve (*parún*); a pestle and mortar (*dauri*) in which to pound spices and condiments; and a hand mill (*chakki*) for grinding corn. These, with a few stools (*píhṛa, píhṛi*), and cots, complete the list of the fittings of a peasant's cottage. In better class houses will often be found bedsteads with well-turned legs of bright-coloured lacquer and chairs of various patterns; wooden chests, often gaudily painted, are used to contain clothes. Utensils of glass, white metal, enamel-ware and aluminium are not uncommon. Illumination is still for the most part obtained from the old fashioned '*chirágh*,' with its cotton wick floating in '*tárámíra*' oil, but the hurricane lantern is to be found in most villages. Bottles and tins of all kinds are never wasted. The kerosine oil tin is put to multifarious uses, of which perhaps the most interesting so far has been the convenient bestowal of the victim of a murder. Everything is neatly arranged in order: space has to be economised and things not in use are disposed on shelves resting upon pegs driven into the walls.

*Siálkot colonists prefer brass.

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Population.

Games.

The peasant's life, though a somewhat hard one, is by no means wanting in amusements. Among the most interesting occurrences are the domestic ceremonies which will shortly be described, or a visit to one of the fairs mentioned further on. But he has also games which help to pass the time pleasantly. The two national games of Shahpur are tent-pegging (*chapli*) for those who have horses, and *pir kaudi* for those who have none. The Tiwánás in the Thal have long been famous for their skill at tent-pegging, but the richer peasants elsewhere have followed their example, and wherever a number of horsemen gather together, they generally get up some tent-pegging, which is watched for hours with the greatest interest by crowds of people. The game, however, which causes most excitement and is most frequently practised is *pir kaudi*, and when it is announced that several known champions are to try each other's skill at this game, the match gathers crowds of people from far and near, each prepared to cheer on his favourite champion. Sometimes the crowd get so excited on these occasions as to lose their tempers and a free fight ensues. The rules of the game are very vague and are not always strictly adhered to, but the general principle is that the players divide into two sides (*kothi*); one man on one side (*báhari*) goes out into the open field, and challenges any two on the other side (*ándari*) to come and catch him. Two of his opponents go out to him and manœuvre round him, but are not allowed to touch him until he has touched one of them. Watching his opportunity the outside player (*báhari*) smites one of his opponents a blow on the chest and tries to dash away, while they try to seize and hold him. Should he escape, his victory is greeted by shouts of "*már gea*" (he has struck them and got away); while should he be caught and dragged to the ground, his defeat is greeted with cries of "*dhé pea*" (he has fallen). Then another challenger comes out to be attacked by another pair of opponents, and so the game goes on. Of the best players each man's form is known and the greatest excitement is shown when a well-known champion is opposed by two other good players. As it is usual for the players to move about the ground quickly when manœuvring round each other, the game is a good test of strength, speed, and agility.

Wrestling is not common and is generally confined to professionals; but the village youths vie with one another in raising a heavy weight (*bugdar*), in working the Indian clubs (*mungli*), or in jumping. The village boys have numerous games, many of them curiously like games played in Scotland. When

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one boy is to be chosen to take a difficult part to be "*it*" in the game—he is selected by show of hands, turned palm up or palm down, the odd man being let off (*pug gea*) each time until only one is left, who is out (*saṛ gea*),—literally "burnt"—or sometimes the selection is made by repeating nonsense verses, such as the following :—

Iṭkin biṭkin lál chhaṭíkin loha láṭu channaṇ gháṭu.*

Io río chor chákur bhamba tára kirṛi.

The boys are counted round, a word to a boy, and the boy to whom the last word comes, escapes (*pug gea*), and so on till only one boy is left (*chhoti*) who has to take the unpleasant task of beginning the game. In many games the players are divided into two sides (*pássa*) which are chosen in much the same way as sides are chosen in Scotland. Two of the best players are appointed captains (*vadda ári*) of the opposite sides, and the other players pair off (*rik*), each pair of players (*beli*) coming up to the captains and giving fictitious names, *e.g.*, "the moon and the star"; "the *lungi* and the *khes*," or "the *kot* and the *killa*"; the captains then in turn guess one of the pair of names and take the boy whose fictitious name it is. In deciding which side is to have the choice of places, they toss up, sometimes a shoe, guessing whether it will come down right side up (*siddhi*) or wrong side up (*aputthi*), or a potsherd one side of which has been wetted. The games played are very numerous, and it will suffice to describe one or two. *Kaudi* is a game in which the great thing is to be able to run as long as possible without drawing breath. The two sides stand on opposite sides of a boundary line (*líka*). One player of *A* side runs into the enemy's ground calling out all the time *kaudi-kaudi*, or *kabaddi-kabaddi*, to show that he is not drawing breath, and endeavours to touch one of the *B* side. If he succeeds in doing this before he has drawn a breath, the boy touched is out (*saṛ gea*, literally "is burned") and has to sit down out of the game. As soon as the *A* player has ceased to say *kaudi-kaudi*, thus showing that he has drawn a fresh breath, any one of the *B* side may touch him and then he is out. So that it is necessary to keep enough breath not only to run after one of the other side, but to get back across the boundary to one's own side, and dash on fast enough to get away from one of the other side who may pursue. Not more than one player of a side can cross into the enemies' ground at a time; if two do cross, the second is out. When one of the *B* side is caught, the *A* player who was first caught can get up and rejoin his

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side, and so on in turn. With reference to this rule a player sometimes utters the challenge, *Béli di mukán—Béli utthea ján* (*i.e.*, I have come) on a visit of sympathy for the loss of a partner, consider that my partner has got up (to rejoin the game). When all of one side are out, the other side has won the game.

In *kandh-már* the players take sides. Those of one side take their stand back to back in a group, which is called the fort (*killa*), and round this is drawn at some distance a circle, outside which the players of the other side take their stand. One of the outer side makes a dash at the fort and touches one of the boys in it, and if he can do this and get back outside the line (*malgea*), the boy he has touched is out, but if the boys in the fort can seize and hold him, he is out (*sargea*). In this game also if one of *A* side is caught, he has to sit down and one of the prisoners of the *B* side gets up, and rejoins the game.

In *chábuk-satt* (throw the whip), all the players except one, called the *chhoti*, sit in a ring with their faces inwards The *chhoti* (*C*) is given a knotted cloth with which he walks round the outside of the ring. He drops this whip (*chábuk*) secretly behind one of the players (*A*), who as soon as he discovers this must jump up, seize the whip, and run round the ring after *C*, striking him with it till he gets round again to *A*'s place. If *C* gets round to *A* again before *A* discovers that the whip is lying behind him, *C* takes up the whip and beats *A* all round the ring back to *A*'s place again.

In *tilion te lamba*, the boys divide into two sides, and all of one side mount on the backs of the boys of the other side, who are called their "horses." They stand in a ring and each boy in turn gets down and runs all round the ring calling out continuously:—

"*Ghora meda chamba*
Tilion te lamba."

If he gets round without drawing breath, he can mount his horse again. If not, all the players of his side have to dismount and become "horses" for the players of the other side. This rule of one side becoming "horses" for the other is a common penalty in games.

Ulli danda is very like hockey, being played with a ball of thread (*ulli*) which each side tries to drive with sticks (*danda*) into the other's goal.

Luk-chhip is a sort of hide-and-seek.

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Population.

Games

The old men play *chaupatt*, a game something like backgammon played with dice (*kauṛi* ; and some play chess (*shatranj*) in which they often show great skill. The favourite game at cards (*tásh*) is one played by three players, using 51 cards (leaving out the deuce of diamonds). It is something like whist, but the cards are dealt round and the play proceeds from left to right, and, in dealing, the cards are taken from the bottom of the pack, not the top. *Chaupaṭṭ* and cards are forbidden for good Musalmáns.

The leading festivals have already been enumerated under the head of the shrines at which they take place. There are also rustic junketings at the time of the horse-fairs in Sargodha and Khusháb, and the Hindús observe the ordinary festivals of their religion in the traditional manner. At Miáni, the Diwáli is a great occasion for gambling, and many come there for this purpose.

Music and dancing.

The villagers are generally fond of music, which is supplied them for the most part by the professional bard-musicians (*mirási*) who travel about to wherever their services are needed and assemble in numbers on occasions of marriage and other rejoicings. In their music, drums of various sorts play a prominent part, time well-marked being almost more important than tune to the rustic ear. The commonest drum in use is the *ḍhol*, a barrel-shaped instrument ; there is a smaller drum of similar shape (*ḍholki*) ; the *ḍaph* shaped like a large tambourine ; the *tásha*, a kettledrum with an earthenware frame ; the *bhehr*, or *naghára*, a very large kettledrum, made by stretching a bullock-skin over an earthen jar, often carried on camels and hence called *shutari*, and the *rabána*, a sort of tambourine. Of these the *ḍaph, tásha*, and *rabána* are played chiefly by Chúhrás and Musallís, and the *ḍhol* by Mirásís Pirháis. Along with these drums are played different sorts of pipes, such as the *sharná*, a pipe with a wide mouth and a reed mouthpiece, or the *bénsri*, a smaller pipe, often played with some melody by belated rustics on their way home from the fields ; or stringed instruments such as the *sarangi* or lute. The airs they play are seldom melodious to a European ear, but the learned among them ascribe them to one or other of the 6 *rágs* or 30 *rágnís* of Indian musicians. Most of them are appropriated to certain hours of the day or night and cannot be sung or played nearly so well at other times.

The villagers, especially in the Thal, are fond of looking on at dancing in which many of them are quite ready to join. Almost all their native dances are of one type—a number of men taking places in a circle round the players and then moving inwards and

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outwards with a rhythmic motion of the feet, keeping time with their arms, turning half-round and back again, and at the same time slowly circling round the musicians. The music gets faster and faster and the dancers gradually work themselves up until the whirling circle of excited shouting dancers forms a striking picture in the blaze of torches lighting up the scene. The most common dance of this kind is called *ghumbar* or *dhrís*. Another dance in much the same way but to different time is the *bágha* in which the dancer alternately beats with his feet and raises his arms; and a similar circular dance called *sammi* is danced by the women.

The Aroras of Núrpur in the Thal have a quite pleasing wand-dance.

Disposal of dead.

At funerals among the Musalmáns the services prescribed in the Korán are followed. The grave is dug with a recess (*sámi*) along the western side, in which the body is placed with its face towards Makka and the feet towards the south. Bricks or stones are then placed leaning over the corpse so that no earth may rest on it. Before the burial the Mulláh recites the burial service (*janáza*), accompanied by the mourners, and after the burial, alms are given to the poor. The Mulláh gets a copy of the Korán and a rupee or two; he is also feasted, as well as the relatives and friends. On the third day after the funeral the relatives read the *kul* and distribute food to those who come to condole with them.

The Hindús and Sikhs burn their dead: the body is cremated on the same day, or on the following morning; cremation during the night is regarded as unpropitious. Ordinarily the house remains in mourning, while the funeral ceremonies are in progress, for 13 or 11 days. On the fourth day after death a bone from each limb is collected and put into a cloth bag and sent off to the Ganges, the same day if possible, in charge of a relative or Brahmin if there be no relative available. If this cannot be done the bones are deposited in the wall of a *dharmsála* or temple and eventually sent to the Ganges within the year or later as opportunity may offer. The other bones and ashes are generally thrown into a river, canal, or pond. On the return of the messenger from the Ganges the Brahmins are feasted in thanksgiving for his safe return. Among the Sikhs these customs are, however, falling into disuse to some extent. On the cremation day, after returning from the burning ground, they go to the *dharmsála* and *karah parshád* is distributed to all present.

Names and titles.

There is nothing distinctive about the names of places or individuals in this district. Most of the place names derive from the personal-name or tribe-name of the principal founder

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(*e.g.*, Jahánábád, Kot Ahmad Khán, Jhammat Ranjhánwála, Utmam Saidpur) or for some physical characteristic [*e.g.*, Chitta, Jabbi, Khusháb (a sad misnomer!), or Kalri,] or from some district officer [*e.g.*, Daviesgarh, Wilsonpur, Nikdur (this last name neatly commemorates both the popularity and the modesty of Mr. Rudkin)] or from some relic dug up (*e g.*, Ukhli Mohla, Hadali), or some characteristic of the inhabitants (*e.g.*, Bhukki, Arekpur). The names of individuals are frequently abbreviated, as is done all the world over: Ghulám Muhammad is familiarly addressed as Gáma, Sharaf Dín becomes Sharfu, and so forth. Titles are much more often assumed by individuals who wish to impress the local officials than they are generally conceded by the community; but the real Tiwánás and a few of the Awáns are commonly spoken of as Malik; the Janjuas of distinction are addressed as Rája; the *Biloches* as Sardár; the Jhammats and *Cháchars as Rána. Pír and Mián are reserved for the religious families, Sayyads, Qureshís, Nagianas, or so-called* Miánás.

Darbárís.

Some idea of the relative importance of the various leading families of the district will be gathered from the List of Divisional and Provincial Darbárís in the Appendix (I. A.).

In addition to these gentlemen there are a number of others who, by reason of their official position, rank, or title, are entitled to a seat in Darbár. Lists of those who have received titles or military distinctions from Government, of retired military officers of commissioned rank, retired civil officers of gazetted rank, and of members of local bodies are also given in the Appendix (I. B.-I. G.).

A list of Honorary Magistrates will be found in Chapter III. Government officials also attend Darbárs in their official capacity, but they are so frequently changed that nothing is gained by adding a list of them.

Kursi Nashíns.

On a somewhat lower plane than the Darbárís are those who are entitled to the courtesy of a chair on official occasions. A list of these will also be found in the Appendix (I. H.).

CHAPTER II—ECONOMIC.

A—Agriculture and Irrigation.

Agricultural tracts.

The mode of cultivation varies with the physical character and irrigation facilities of the different parts of the district, already described in Chapter I. In the recent settlements, assessment circles were, in each tahsíl, based upon these variations:—

Tahsíl.	Assessment circle now adopted.	Assessment circle adopted by Mr. Wilson.	Corresponding circle of regular settlement.	Brief description of present circle.
Bhera ...	Chenab ...	Chenab ...	Hithár .. / Nakka ...	Chenab valley and perennial irrigation.
	Bár ..	Bár ...	Utár ...	Perennial irrigation.
	Jhelum ...	Jhelum ...	Nakka ... / Hithár ...	Jhelum valley and inundation canals.
Sargodha ...	Bár Uthla ...	Bár ...	Utár ...	Perennial irrigation.
	Bár Hethla ...			
Shahpur ...	Ara ...	Ara ...	Utár ... / Nakka ...	Perennial irrigation.
	Jhelum ...	Jhelum ...	Nakka ... / Hithár ...	Jhelum valley and inundation canals.
Khusháb ...	Jhelum ...	Jhelum ...	Hithár ... / Nakka ...	Jhelum valley.
	Thal ..	Thal ...	Thal ...	Sandy upland.
	Mohar ...	Mohar ...	Danda ... / Mohar ...	Foot of hills.
	Hill ...	Hill ...	Hill ..	Salt Range.

The Bár Uthla circle of Sargodha was originally in the Bár circles of Bhera and Shahpur, and the Bár Hethla circle was partly in the Bár circle of Shahpur and partly in Jhang District.

Soils of the cis-Jhelum tract.

In the Bhera, Sargodha, and Shahpur Tahsíls and in that portion of the Jhelum valley which lies in the Khusháb Tahsíl, the people as a rule recognize no differences of soil except such as are

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Soils of the *cis*-Jhelum tract.

based on the existence or otherwise of irrigation, and on the capacity which each kind of soil possesses of retaining water for a longer or shorter period. In the riverain, land annually inundated by ordinary floods is called *kachcha ;* higher land subject to inundation by high floods is called *bela*, a term generally applied to the islands in the river channel ; a thin layer of alluvial soil over river-sand is called *rappar ;* a deposit of silt on old land is *att*, while *seu* or *sailába* is the general term for land subject to inundation from the river. A light sandy soil is called *ratúli* (*i.e.*, sandy) ; a more fertile loam with a less admixture of sand is called from its colour *ratti* (*i.e.*, red) ; and a still stonger clayey soil is known as *dar*, or, it it be in a hollow often filled with rain water, *dabbar*. With sufficient moisture *dar* is the most productive, but in ordinary seasons *ratti* gives the best crops. Land impregnated with salts is everywhere known by the name of *shor kallar*, or *kalri*. *Maira* is highlying generally sandy ground on which rain water does not lie ; patches of hard barren land off which water flows readily are called *rari ;* both are included in the term *thangar*, which means highlying land. *Bhusri* is light sandy loam, while a harder lowlying loam is called *rohi*. The long narrow depressions which are frequent in the Bár, and are probably old river channels, are generally known as *váhal ;* if very narrow they are called *nali ;* a wide hollow is called *chura* and a small hollow *chol ;* lowlying ground in which grass grows well is called *talla*. *Rag* is the sloping bank of a hollow or depression. Cultivated land is generally called *rarhi ;* if embanked to catch the drainage water off neighbouring higher land it is *karáhi*, *karhat* or *pál ;* if near the village and benefiting from its manure it is *nyái* (a term also applied to patches of cultivation in the Bár) ; if irrigated from wells or *jhalárs* it is *cháhi* or *ábi ;* if irrigated from a canal (*nála*) it is *nahri*.

In this tract for ass ssment purposes the soils have been classed according to means of irrigation as follows :—

1. *Cháhi*, including all land irrigated from wells or *jhalárs*, whether assisted by canals or river floods or not.
2. *Nahri*, *i.e.*, land ordinarily irrigated by canals.
3. *Sailáb*, *i.e.*, land subject to inundation from the river.
4. *Báráni*, *i.e.*, land dependent on the immediate rainfall only.

Soils of the Thal.

In the Thal the peasants make the following distinctions of soil. *Láhga* or *paili* is the name given to the patches of hard level soil which appear here and there between the sandy

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hillocks, benefit from their scanty drainage and produce excellent gram and fair crops of *bájra* and *moth*. The sides and surfaces of the hillocks themselves are sometimes (especially near the villages) slightly scratched and sown with the seeds of the water-melon, and this primitive style of cultivation is known as *vári*. When uncultivated, the sand-hills are known as *tibba* or *man* or collectively as *Thal*, and the bard patches between are called *lak*, or, when extensive, *patti*. In this tract no distinction of soil, or class has been made for assessment purposes.

Soils of the Mohár.

The wide barren plain of hard salt-impregnated soil near the base of the hills, known collectively as *chhachh*, is also called *rari* and this is sub-divided into *jabbari* and *kallar*, according as it absorbs moisture or is impervious to it. A little cultivation is carried on here by means of the rainfall on the field itself and this is known as *búndi* or *báráni*, but the most usual form of cultivation is by means of long low embankments so constructed as to guide the drainage of the higher barren soil (*rari*) on to fields lying at a slightly lower level, which then become capable of cultivation, and are known as *rarídár*. The stony land at the base of the hills is called *gár* or *garanda*, and the cultivated land further out on to which the water of the hill-torrents is conducted by a system of embankments is called *náladár*, and corresponds to the *hail* of the hill circle. Still further out the lands which only benefit from plentiful drainage bursting the banks of the nearer fields are known as *chhaldár*. Patches of cultivation inside the hills are called *cháhri*. Here for purposes of assessment the soils are classed as (1) *náladár* or lands benefiting from hill-torrents; (2) *rarídár*, or lands receiving drainage from barren tracts lying slightly above them; or (3) *bárání* (the *búndi* of last settlement) or lands dependent on their own rainfall alone.

Soils of the Salt Range.

The soil of the valleys, formed by the gradual disintegration of the limestone and sandstone rocks of which the upper surface of the range is chiefly composed, is exceedingly fertile and its powers are being constantly renewed by fresh deposits brought down by the torrents from the surrounding hills, so that there is little need of manure or fallows. It does not vary much in general character throughout the tract, except that in Jába and other villages to the north-east, which are bounded on the north by a range of sandstone, instead of the usual lime-stone, the soil is more sandy and less fertile than in the villages to the west. Its productive powers, however, differ greatly in the several villages, and even in the same village, according as the situation of the field places it more or less in the way of intercepting the

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Agriculture and Irrigation.

Soils of the Salt Range.

fertilizing deposits brought down by the hill-torrents after rain, or of receiving the drainage from neighbouring higher grounds. It is on this distinction that the peasants base their classification of soils, which has been followed in the recent settlement. Where a torrent debouches from the hills on to comparatively level ground, a strong embankment is thrown across it, not to hold up the water permanently, but to turn it out of its deep natural channel on to the higher-lying culturable land. Should one embankment not be sufficient, another is made lower down to control the surplus water, and so on, until the whole of the water brought down by the torrent, laden with its limestone mud, is poured over the fields on the slopes of the valley. If the torrent is a large one, the embankments are so arranged as to divide the body of the water into several more manageable streams. The fields which receive the first flow have strong and high embankments built round their lower edges so as to retain the water until the field is thoroughly saturated, it is then passed on through an opening made in the embankment to the field below, and so on, in turn, until the whole of the water has percolated into the soil. Thus the slopes of the valleys have been gradually worked into a succession of terraces, one below the other, and in some cases the dams are so strong and so well designed that the natural channel of a large torrent remains perfectly dry and, even after heavy rainfall on its catchment area in the hills, the whole stream is turned on to the ridges on either side, and passing down gradually from terrace to terrace irrigates a large area of comparatively high land, which would naturally remain dry and almost unculturable. Those fields which get the first flow of water are the most favourably situated, for they are sure of irrigation even after a scanty shower. They are generally to be distinguished by the high and strong embankments needed to retain the water sufficiently long after heavy rainfall, and are known as *hail*. (This term is also applied to land situated immediately below a village-site and benefiting from the drainage of the village, which usually brings down some fertilising manure along with it.) The fields situated farther from the mouth of the gorge, so as to receive only the surplus water of the torrent after the *hail* has been irrigated, or which receive only the surface drainage from a small area of higherlying land, are classified as *maira*. Their embankments are generally lower and weaker than those of the *hail* fields, and their soil looser and lighter. Those fields again which are so situated as to get very little drainage at all, and to be dependent almost entirely on the rain which falls directly on them, are known as *rakkar* or *báráni* and are often more stony than *hail* or *maira*. These are the only

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Soils of the Salt Range.

important distinctions of soil recognised by the people and useful for assessment purposes All land not irrigated from a well or permanent water-course has accordingly been classed as *hail*, *maira* or *lárání* The small area irrigated from wells is classed as *cháhi*, and the insignificant area irrigated by small perennial streams is classed as *ábi*.

Soil as distinguished in the Revenue records.

In the Assessment Reports the classification of soils has been made as simple as possible, and distinguishes only the following varieties :—

(*a*) *Cháhi*=all land ordinarily irrigated from a well or from a *jhalár* on the bank of a river or inundation canal.

(*b*) *Cháhi-nahri*=all land irrigated partly by an inundation canal and partly by a well.

(*c*) *Jhalári*=all land irrigated by a *jhalár* on a perennial canal.

(*d*) *Nahri*=all land irrigated entirely by a canal, whether perennial or inundation.

(*e*) *Abi*=all land irrigated from a perennial stream or spring.

(*f*) *Sailáb*=all land benefiting by river floods.

(*g*) *Báráni I*=all land directly commanded by a torrent or by the flow of water from a hill-side, and sufficiently embanked to retain the moisture : in the Mohár circle such land is recorded as '*náladár*' and in the Hill circle as '*hail.*'

(*h*) *Báráni II*=all land benefiting by water flowing off higher land, and not included in *Báráni I* : in the Mohár such land is recorded as '*rarídár*' and in the Hills as '*maira.*'

(*i*) *Báráni III*=all rain land not included in *Báráni I or II.*

(*j*) *Banjar*=waste land fit for cultivation ; if such land has not been cultivated within the last eight harvests it is recorded as *banjar qadím* : if it has been uncultivated for more than three and less than eight harvests it is recorded as *banjar jadíd.*

(*k*) *Ghair mumkin*=all land not available for cultivation ; this includes large areas of reserved forest which might be cultivated, if disforested.

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Soil as distinguished in the Revenue records.

In the distribution of revenue over holdings, the villagers sometimes recognize other distinctions; *e.g.*, they may distinguish between a *jhalár* on the river-bank or on an inundation canal and an ordinary well: they nearly always distinguish between *cháhi* land which uses the well as of right, and similar land which only gets the well-water by favour of the well owners (*ariyatan cháhi*). In some villages *cháhi* is graded according to quality. In the Hill Circle sour land round the margin of the lakes is classed as *kallari* and in the plains the *kallar*-ridden waste is sometimes distinguished from ordinary *banjar*. In the Thal, *lágha* and *wári* are differently rated in most villages. These distinctions are all entered in the orders distributing the revenue.

Systems of cultivation.

The present distinctions of agriculture follow closely the circles of the regular settlement. In the Hithár circles, river-floods and wells are the principal feature; in the Nakka, perennial or inundation canals assisted by wells; in the Utár, perennial canals alone; in the Thal and Danda, rain water led by shallow drains; and in the Mohár and Hill, torrents and rain water, with some wells in the last-named circle.

Seed time and harvest.

The agricultural year may be considered to begin in the month of Visákh (about the middle of April). By that time the inundation canals have generally begun to flow, and the ground has to be prepared for the cotton crop and early supplies of fodder. If rain falls in the unirrigated tracts, the land will be prepared for the *kharíf* millets. If the canals are not flowing satisfactorily and there are no spring showers, these initial operations may have to be deferred till the beginning of the monsoon, which generally occurs between the last week in June and the middle of July. Sowing of *kharíf* millets and pulses is done as far as possible in Sáwan (July-August), and the autumn crop is generally known as *Sáwani*. But considerable areas may be sown during breaks in the rains, if the original sowings are short and these, known as *pichetra*, are very apt to come to grief owing to an early cessation of the monsoon or of the flow of inundation canals. The *kharíf* harvest is reaped in November and December: the picking of cotton, of course, goes on for a considerable time. The bulk of the spring crop (*rabi* or *hári*) is sown on the rainfall of September, but when the monsoon has come to an end in August every shower before Christmas will be utilized to increase the sown area. Harvesting begins in April, and the crop is not entirely garnered till the end of May. The gram harvest is earlier than the wheat. *Toria* is reaped about Christmas time, and turnips a month or two later. Tobacco and melons are the last crops to mature.

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Agricultural implements and operations.

The plough and ploughing.

The plough (*hal*) is, with the exception of the coulter (*phála*), made entirely of wood. The ploughshare (*kur*) is a strong flat piece of wood, generally of *kíkar* or *phuláh*, broad at the back and centre but gradually tapering to a point to which the iron coulter (*phála*) is fitted by a staple (*kunda*). At the centre of the ploughshare is fitted the shaft (*hal*) which is fastened in its place by a wedge (*ag*), and is attached to the yoke when ploughing is to be done. Another shaft (*killa*) is driven into the ploughshare behind the *hal* and to this is fastened the handle (*hatthi*) by which the ploughman guides the plough. The yoke (*panjáli*) has three divisions marked off by bars, the two inner being fixed (*gátra*) and the two outer (*velná*) being removeable so as to allow the yoke to be passed over the necks of the bullocks. In ploughing a field is generally divided up into sections (*bhanga*), and each section is ploughed in narrowing circles beginning at the outside and ending in the middle. The plough like the Persian-wheel is always turned by the left (*sajje pher*), and the right-hand bullock (*báhari*) should always be stronger then the left-hand one (*ánari*) as he has more turning to do. When the plough-man wants to turn to the left he calls out *áhh áhh* and touches the quarter of the right-hand bullock; and to turn to the right he calls out *táhh táhh* and touches the left-hand bullock. The depth of a ploughing varies much in different soils. In the sandy fields of the Thal the furrow (*or*) is a mere scratch, and even in the best of soils it is rarely deeper than six inches. A good farmer will plough his land as often as he can to pulverise the soil and expose it to the air; more especially on land irrigated by a well, which is sometimes ploughed as many as ten or twelve times, while land fertilised by river-silt is generally ploughed only once or twice before sowing.

Sowing.

Sowing is most generally done by drill (*náli*), the drill being a hollow bamboo with a wide mouth, which is attached to the back of the ploughshare and fed by the ploughman's hand; but on *sáiláb* lands it is often done broadcast (*chhatta*). Generally speaking, the peasants are very careless as to the quality of the seed, being content to sow any old stuff they get from the village shop-keeper; but some of the more intelligent and well-to-do among them keep the best of their grain for seed. A great improvement was made on the Kalra and Ghausnagar estates under the Court of Wards by getting good seed from Amritsar and Jhang. The field after sowing is levelled and pulverised by means of the *sohága*, a heavy log or beam drawn over it by bullocks, the drivers standing on it to make its weight greater.

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Embankments are made with the help of the *karáh*, a sort of large wooden shovel drawn by bullocks and held by the driver. Beginning at the top of the field the peasant drives his oxen towards the lower part holding down the *karáh* so that it gathers up a quantity of earth. This the bullocks pull down to the lower edge of the field, where the driver lifts the *karáh* up so as to deposit its contents on the embankment (*bannh*) and carries it back empty behind his bullocks to the higher part of the field. This process both levels the field and raises an embankment at its lower edge to retain the drainage water.

On lands irrigated from wells, the field is divided for irrigation purposes into small compartments (*kiári*) by ridges (*bannhi*) raised by means of the *jandra*, a large wooden rake worked by two men, one of whom presses it into the soil and pushes the earth up while the other assists him by pulling at a rope attached to the rake. Digging is usually done with an iron mattock (*kahi*) with a short wooden handle, worked by striking it downwards into the earth and drawing it inwards towards the digger, who thus finds it most convenient to throw the earth behind him. Weeding is done with the *ramba*, a flat iron spud with a sharp edge and a short handle, used also for cutting grass close to the roots.

Reaping is usually done with the *dátri*, a sickle with a curved saw-edged blade. The corn is tied in small sheaves (*gaddi*) which are thrown on the ground, and afterwards put up into stacks (*passa*). Grain is threshed (*gáh*) by being heaped on the threshing-floor (*pir*), which is merely a level space of ground beaten hard for the purpose, and trodden out by bullocks. The corn is tossed and turned with a pitch-fork (*trangli*), and when the grain has been threshed out, it is winnowed by letting it fall from a basket-tray (*chhajj*) held up by a man, so that the wind blows the chaff away from the grain. The grain is then put up into a heap until all the parties interested can gather to have it divided among them. Stored grain is very liable to be attacked by weevil (*ghun*) owing to the careless way in which it is kept in mud huts or bins. The broken straw (*bhoh*) is generally stacked at the threshing floor, the stack (*passa*) being thatched with straw and protected with a hedge of thorns. In the Salt Range the *bhoh* stacks are often put up in hexagonal shape, sleeping cots tied together being used to give the stack its shape.

Carts

The number of carts in the district is extraordinarily few, especially considering the suitability of the whole of the cis-Jhelum tract, with its firm soil and good roads, for wheeled

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conveyance. According to the last returns, however, the number seems to be increasing and is now 4,072, of which 2,700 are in Sargodha, and only 76 are in the Khusháb Tahsíl. The class of cart (*gadd*) in common used is a poor affair, the wheels being often made of block wood, without any spokes, and can only carry a very small quantity of stuff.

The peasants are very slow to adopt improved methods and implements, but it will appear from a subsequent paragraph that the Sargodha Seed Farm is to some extent a centre of progress in these respects.

Rotation of crops.

Over the whole of the plains portion of the district, there is practically no systematic rotation of crops. In the *cis*-Jhelum tahsíls only 20 or 15 per cent. of the cultivated area is left fallow throughout the year, and about 60 per cent. will be under *rabi* crops and 20 to 25 per cent. under *kharíf*. This means that a large area will be put under wheat year after year with an occasional change to *toria* followed by cotton, or *chari*—succeeded after a fallow by cotton and '*maina*.' In the Thal the rule is to 'sow when you can.' In the Mohár the most secure fields are reserved for *rabi* crops; when they show signs of exhaustion, they are given a complete rest for some years, if other fallow fields are available elsewhere: otherwise they are given a change to *kharíf* crops for a spell. In the hills it is usual to have large blocks of land under crops and other large blocks fallow. A common rotation is wheat, *bájra* or *jowár* (after intercultured with *mung* or *tarámíra*), fallow, fallow, wheat, and so on.

Manure.

Manure is applied to *cháhi* land so far as available, and as fuel is generally plentiful in this district, less of the cowdung is consumed as fuel than in the east of the Punjab and more is available as manure. Owing to the trouble of carriage the lands near the village site generally are the best manured; and similarly of the land attached to an outlying well, the fields nearest the well usually get more manure than those at a distance; so that often outlying fields get practically no manure at all, and are consequently left fallow more frequently than those near the well Fields intended to grow rich crops such as sugarcane or tobacco are plentifully manured. On the canal-lands, manure is generally not forthcoming in large quantities; on the inundation canals and the *sailáb* lands the Jhelum silt is an excellent substitute. On the rain lands manure is not used, as it is said to burn up the soil.

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Double cropping.

Intensive cultivation is not common in this district, except on the wells worked by Arains, Maliárs, Kambohs and other skilful farmers in the neighbourhood of the towns and large villages and in the hills. On such wells vegetables, spices and sugarcane are grown for the market, and two or three crops raised in the year. *Mehdi* regularly gives two crops a year. On some of the best *sailáb* lands it is possible to grow wheat after maize for two or three years in succession. But the rest of the double-cropping generally consists in the raising of a cheap fodder crop, such as '*maina*' in succession to cotton or maize, or else in the interculture of *tárámíra* with *bájra*, which is common in the hills, or of gram with cotton. On the inundation canals, if land has become too water-logged for wheat, the farmer will sometimes try to recoup his loss by growing gram in succession to rice.

The agricultural population.

We have already discussed in Chapter I, Section C, the principal tribes engaged in agriculture. Table 17 shews that in 1911 there were 130,042 males and 6,447 females actually engaged in agricultural and pastoral employment, supporting 262,103 dependents. There were 85,388 owners or grantees of land in that year, according to the Land Revenue Report, but this number would not include grown-up proprietors whose fathers were still living. In the Census returns 22,722 persons were recorded as 'rent-receivers,' 328,662 as 'ordinary cultivators,' and 354 as land agents It is impossible to ascertain the exact number of agricultural labourers, as there are many men who lend a hand at harvest times, and make their living by some other occupation at other seasons, but 29,508 persons were shewn as farm-servants and field labourers. In the canal area with its large holdings and heavy wheat crop there is a keen demand for hired labour in the spring, and large numbers of both sexes flock in from the Sind-Ságar Doáb and elsewhere, and make a small fortune in a short time. The traditional payment for reapers is the twenty-first sheaf, but as the reaper can make the sheaf as big as he likes he often gets something approaching one-tenth of the crop. In plague years even higher rates have to be paid, but ordinarily the supply of labour is equal to the demand. On the inundation canals and the weakest wells of the riverain, tenants are difficult to obtain and to keep.

Market-gardeners ...	358
Foresters and woodmen	6,050
Stock-farmers and graziers ...	10,938.

The agricultural population includes the followers of pursuits mentioned in the margin. The majority of the woodmen and graziers are in Khushab Tahsíl.

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Crops grown.

Table 19 shows the areas under each of the main crops and the total areas cropped and failed for each year since 1900. This table shows the quinquennial averages in thousands of acres: the outstanding fact is that crops have doubled, and that even in Khusháb there is a gain of about 50 per cent.

Period.	District.		Bhera.		Shahpur		Khushab		Sargodha.	
	Cropped.	Failed.	Cropped.	Failed.	Cropped.	Failed.	Cropped.	Failed.	Cropped.	Failed.
Average, 1890—94	525	61	184	19	163	10	178	32	...	...
Average, 1895—99	433	125	146	48	156	22	131	56	...	...
Average, 1900—04	622	134	227	41	237	28	158	64	...	...
Average, 1905—09	1,085	172	350	44	235	28	219	63	281	37
Average, 1909—14	1,159	124	341	26	219	21	242	47	357	29

The quality of the cropping now and at last settlement may be compared by percentages on the total cropped area.—

	Wheat.	Cotton.	Oilseeds.	Gram.	*Bájra.*	*Jowár.*	Pulses.	Barley.	Other cereals.
Average, 1890—94 ...	43	6	4	6	17	6	3	2	10
Average, 1909—14 ...	43	10	8	8	8	2	2	1	18

It will be seen that cotton, oilseeds (especially *toria*) and gram have gained at the expense of the cheap millets and pulses. Of the other cereals, maize, *massar* and *chína* are the most important, but a considerable area of oats is grown in Sargodha Tahsíl.

Wheat.

By far the most important crop is wheat (*kanak*). It is grown on all classes of land, but greater care is taken in its cultivation on the lands irrigated from wells than on other classes of soil. In such lands ploughings for wheat begin as early as the previous January and go on at convenient seasons throughout the year till seed time, sometimes as many as 12 ploughings being given. On other classes of land ploughing begins in June

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and goes on till October, the more ploughings the better for the crop. The commonest kind of wheat grown outside the Lower Jhelum area is the soft red bearded variety (*ratti-chihgari* or *dagar*), but sometimes one sees a field of a coarse white wheat known as *vadhának*, the outturn of which is about a fourth larger than that of the red wheat, and its flour whiter but not so nourishing, while its straw is very inferior. On the canal, the favourite types are *ghoni*, and "*lal kasar wáli*;" the former is a beardless white variety and corresponds to the Lyallpur types 17 and 18; the latter corresponds to type 11, and fetches at least 2 annas per maund more than the other varieties. Only a very little beardless red wheat (*rodi lál*) and fine white wheat (*dáúdi*) are grown, as they are considered more subject to injury by birds and winds. Generally speaking, the peasants are very careless about the quality of the seed, and it is often sown more or less mixed with barley. Sometimes a little oats (*jodra*) is sown with the wheat to be gathered before it for fodder. The amount of seed used is for good soils generally about a maund an acre, but on poor unirrigated soils as little as 24 sers is sown. On the *sailáb* lands about 32 sers and in very good *cháhi* lands as much as $1\frac{1}{4}$ maunds per acre. Wheat sowing begins with the month of Katte (about 15th October) and goes on to about the middle of December, though sometimes, if the season has been a dry one and favourable rain falls in December, sowings may go on into January, but the sooner wheat can be sown after 15th October the better. On unirrigated lands little is done to the wheat after it is sown; it is left to the rains, and the outturn depends very much on whether the winter rains are favourable or not. If the winter is a dry one, large areas fail altogether to produce a crop, and the outturn is generally poor. If rain falls at opportune intervals in January, February and March the outturn, even on unirrigated land, may be very good. On lands irrigated from wells, the amount of irrigation depends on the rainfall, but in dry seasons the wheat crop may be given as many as 15 waterings to ripen it. If the crop promises to be a very strong one, the green wheat is cut (*tap*) or grazed down to prevent its growing too rapidly. On lands irrigated from wells the tenant is allowed to cut a reasonable amount of green wheat for the well-bullocks which varies according to the dryness of the season, and may in a dry year amount in the villages distant from the river to as much as half the crop. Little attention is paid to rotation of crops, wheat following wheat without a break, especially on lands flooded by the river; in the Salt Range, however, wheat is generally alternated with *bájra*. On *sailáb* and inundation canal lands the outturn is much

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Wheat.

reduced by the prevalence of weeds, such as the thistle-like *lei*, the onion-like *bhukhat*, or the thorny *joah*, and little trouble is taken to eradicate them ; on other irrigated lands, however, more attention is paid to weeding. The estimated outturn of wheat on lands irrigated from wells is in most circles 10 maunds per acre, but in the Jhelum Circle of Bhera it is 12 maunds, and in the Hill Circle 13 maunds ; on land irrigated from inundation canals it is almost everywhere 8 maunds per acre. On the Lower Jhelum Canal it is 10½ maunds in the Bhera Bár and Sargodha Bár Utla, and 8½ maunds in the Sargodha Bár Hethla and the Shahpur Ara. On land flooded by the rivers it is 8 maunds on the Jhelum and 7 on the Chenab ; and on land dependent on rain it varies from 6 maunds in the Bár to 2 maunds in the Thal. For the whole district the all-round outturn on all classes of land is about 9 maunds or 12 bushels per acre, and the total annual average yield of wheat for the whole district is 4,500,000 maunds with a money value at 13⅓ seers per rupee of Rs. 1,35,00,000, or more than six times the new assessment of the district. The quality of the wheat grown generally improves as one goes further from the river, and that of the Salt Range is famous for its good quality, its freedom from admixture with other grains or dirt, and the greater nutritiousness of its flour. It is valued for export and generally commands two annas per maund more than that of the riverside Reaping begins in the plains towards the end of April and in the hills about the beginning of May and lasts for about a month.

Cotton.

The crop next in importance is cotton (*vár*) which occupies 10 per cent. of the total harvested area. Almost every well has from one to three acres of cotton : it is largely grown on canal irrigated land, where about 13 per cent. of the total harvested area is cotton ; it is not grown to any great extent in the Khusháb Tahsíl, except that in very favourable years a good deal is sown in the Mohár. It is sown in March or April, about 8 or 10 seers of seed (*peva*) to the acre. The variety of cotton usually sown, known as the indigenous variety (*desi*) with a yellow flower, gives ordinarily 10 seers of ginned cotton to a maund of unginned ; but a foreign variety (*viláiti*) with a red flower, which is fairly popular, gives 13 seers to the maund. The type known as No. 4 F supplied by the seed farm is rapidly gaining ground. On lands irrigated from wells cotton has to be watered a good many times and weeded twice or thrice. Cotton picking (*choni*) begins in October and goes on to the end of December at intervals of a few days as the pods (*doda*) ripen and burst ; it is generally done by bands of women and

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Cotton.

girls, who are given about an eighth or a tenth* of the crop for their trouble and may be seen returning in the evening laden with their snow white spoils. The produce of cotton averages 5 or 6 maunds per acre on lands irrigated from wells, 3 or 4 maunds on canal-irrigated lands and from 2 to 4 maunds on unirrigated lands. The wood is cut for fuel, and sometimes the same roots are left to produce two or even three crops (*modhi*), but more frequently they are stubbed up and the land sown with wheat. The cotton crop is often sold standing at prices averaging about Rs. 30 per acre.

Oilseeds.

Nearly 8 per cent. of the harvested area are under oil-seeds. On the Lower Jhelum Canal this may be generally understood to mean '*toria*' and elsewhere '*tárámíra*;' a little linseed is grown in the Jhelum valley, especially about Miáni, but on the whole it is not an important crop, and the same may be said of '*sarson*' and *til*. Out of 90,000 acres of oilseeds, 30,000 acres are in Bhera, and 50,500 in Sargodha; only 3,500 acres are grown in Shahpur, of which about 2,500 is '*toria*.' The stiff soil of the Ara is not suited to this crop.

Toria comes between the *kharíf* and the *rabi*, ripening in January: it is an easy crop to grow, and so long as it gets water regularly up to November, it is not subject to any special calamities. It cannot be grown on the inundation canals, but successful experiments have been made with it in the riverain. It is supposed to yield from 4 to 6 maunds an acre.

Tárámíra occupies nearly 6,000 acres in Khusháb, 5,000 of this being in the Hill Circle, in which this crop represents 11 per cent. of the year's harvest. Here it is commonly sown among the '*bájra*' or '*jowár*;' elsewhere it is grown on inferior lands or along the boundaries of fields. The outturn is about 2 maunds to the acre.

Gram.

Gram occupies nearly the same acreage as oil-seeds, *viz.*, not quite 8 per cent. of the matured area. Out of 87,000 acres grown, Bhera and Shahpur have about 15,000 each, Sargodha 8,000, and the remainder (almost 49,000) is in Khusháb. The discovery that the sandy soil of the Sind Ságar Doáb was ideal for gram was an event of very considerable importance, and its full significance is not yet apparent. In *rabi* 1915, 77,000 acres of gram were grown in Khusháb Tahsíl and gram sold at 11 seers to the rupees, at head-quarters. Even supposing that the *local market rates* were 13 seers, the value of the crop was over

* In the colony *chaks* the share taken by the pickers varies between one-seventh and one-third.

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16 lakhs of rupees, or six times the new final revenue demand. An average acre of gram is supposed to produce 9 maunds in the Thal and 8 maunds elsewhere. Little gram is grown on the wells but on the inundation canals it does quite well. Wheat and gram are very rarely intersown in this district, but a good deal of gram is sown on the rice-stubble in Bhera.

Bájra.

The next most important crop is *bájra* or spiked millet (penicillaria spicata) which occupies nearly 8 per cent. of the total harvested area. It is most important in the Mohár where the proportion grown is 33 per cent.; in the Hill Circle too it is grown on 30 per cent. of the area harvested. It is chiefly sown on unirrigated land and the amount of seed is usually about 2 seers per acre, sown broadcast. The land is ploughed from March onwards from two to five times and the seed is sown after good rain in May or June but more often after the monsoon bursts in July. In the Jhelum valley the seed is generally sown in irrigated land in June and the seedlings (*paníri*) afterwards transplanted. Great trouble is taken to protect the crop from birds. A platform (*mannha* is erected in the middle of the field, and on this a woman or boy sits all day long frightening away the birds by slinging (*khabani*) bits of earth at them or waving rags and clanging pots by means of strings radiating over the field. The reaping begins in October and goes on to December, the ears (*sitta*) being cut off from time to time as they ripen; and in this season it is common for the people to leave the villages and camp in the fields in whole families, living in the huts (*dhok* or *bhan*) erected for the purpose. The average produce of *bájra* on unirrigated lands is about 6 maunds per acre on embanked lands in the Mohár and Salt Range, 4 maunds in the Jhelum valley, and from 2 to 3 maunds in the poorer lands of the Mohár and Thal. On *nahri* and *sailáb* lands its produce is 6 or 7 maunds per acre and on lands irrigated from wells 10 or 12 maunds. The straw (*tánda*) is not very nutritious and in good years is neglected, though in years of drought it may sell at as much as a rupee per head-load.

Jowár.

Jowár or great millet (sorghum vulgare, which occupies 2 per cent. of the harvested area, is largely grown on lands irrigated from wells, where it is used more as a fodder crop (*chari*) than grown for grain, and a considerable portion of it is cut green and fed to the bullocks, especially when the monsoon rains are scanty. In the Ara circle, however, it is generally allowed to ripen, and there produces about 7 maunds per acre; elsewhere 6 maunds is a fair crop on lands irrigated from wells, and 4 or 5 maunds on other classes of land.

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Maize.

Maize is grown to a small extent on wells in the river valleys and on manured lands in the Salt Range. About 10,000 acres are grown on the Lower Jhelum Canal, especially by Siálkoti and Jat Sikh grantees. About 18 seers of seed is sown per acre, and the average outturn on irrigated and manured lands is about 12 maunds per acre.

Rice.

Rice is grown chiefly on canal-irrigated and *sailáb* lands in the Jhelum valley, and in the Ara circle. Previous to 1888 the cultivation of rice on canal lands was rapidly increasing, but in that year, owing to the great quantity of water consumed in irrigating rice, the canal rate for that crop was raised, and this led to a great contraction of area. The average outturn of unhusked rice is about 10 or 12 maunds per acre.

Barley.

Barley (*jo*) occupies 1 per cent. of the harvested area and is grown chiefly on lands irrigated from wells or canals, the average outturn being from 10 to 15 maunds per acre on such lands.

Moth.

Pulses occupy altogether about 2 per cent. of the harvested area. They are generally sown with *jowár* and *bájra*. *Moth* is largely grown in the Thal where it forms 23 per cent. of the total crop; it is grown on poor land and the produce is about 3 maunds per acre.

Mung.

Mung is grown chiefly in the Salt Range and its outturn is about 4 maunds per acre.

Sugarcane.

Sugarcane (*kamád*) is grown mostly on the canal in Sargodha and Bhera Tahsíls, but there is also a certain amount on the wells near the town of Bhera, Shahpur and Sáhíwál. In the Chenab valley nearly every well has its two or three patches of cane aggregating from one to two acres per well, but the crop, though very valuable, practically occupies the land for three harvests, and requires so much attention and such careful cultivation and watering that few wells have more than 2 acres. It is a most useful crop. When ready to be pressed it affords employment for a time to a large number of hands and each person engaged in cutting and peeling the canes, in carrying them from the field to the press (*velna*), in tying them into convenient bundles, in feeding the press, attending to the fire, or stirring the juice, is not only allowed to chew and suck as much raw cane as he likes, but is permitted to carry away a few stalks every day. The leaves and ends of the canes make a useful fodder for cattle. The average produce is about 20 maunds of *gur* per acre, but much of this goes in payment to the persons employed in extracting the juice. In the Jhelum valley very little cane is

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grown for the purpose of making sugar, as it is found more profitable to sell it to be sucked raw (*ganna*). Two varieties are grown, - one the indigenous (*desi*), and the other the *Sahárani*, so called because its seed was brought from Sahâranpur some forty years ago. The latter variety is much superior to the indigenous cane, and has now almost superseded it. It is usual to sell the standing crop near the towns to Khatrís, who retail the stalks in the bazar at a *paisa* or less per stalk, and near the towns the price paid for cane of this kind is from Rs. 18 to Rs. 30 per *kanál* and averages about Rs. 200 per acre.

Tobacco and vegetables.

Very little tobacco is grown in this district and smoking is not nearly so general among the people as it is in districts further east. It is discouraged by the *pírs* of Siál Sharif, but is fairly general in the Salt Range.

Vegetables occupy 7 per cent. of the total harvested area of the three Jhelum circles and seem to be growing in popularity: probably because they are principally grown on lands irrigated from wells and consumed by the tenants' well bullocks. Towards the end of the cold season they form an important part of the diet of the peasant classes. By far the most common vegetable is turnips, which are generally not thinned out sufficiently and are consequently of small size; but near Jhawarián a very good sized turnip is grown. Carrots and radishes are the commonest vegetables after turnips.

Mehdi (lawsonia inermis).

This plant, so often seen in our gardens as an ornamental hedge, is extensively cultivated about Bhera, where it occupies nearly 650 acres, for the sake of the dye extracted from its leaves, which, dried and reduced to powder, form a regular article of commerce. The mode of cultivating it is as follows:—The soil is prepared by repeated ploughings, not less than sixteen, and heavy manuring. Before sowing, the seed is allowed to soak in water for twenty-five days. It is then spread on cloth and allowed to dry partially. The plot of land in which it is proposed to grow the *mehdi* is then formed into small beds, and some days before sowing these are kept flooded. The seed is scattered on the surface of the water, and with it sinks into the ground. For the first three days after sowing water is given regularly night and morning; after that only once a day. The young plant first shows above ground on the fifteenth day, after which water is only given every other day for a month, when it is supplied at intervals of three days, and this is continued for another month, by which time the plants have become nearly two feet high. They are now fit for transplanting. The mode of conducting this op-

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eration is as follows :—The young plant on being taken out of the ground is reduced by nipping off about six inches from the centre shoot. After having been subjected to this treatment, the young plants are singly put into holes previously dug for them at distances of about a foot from each other. They are then watered daily until they have recovered the shock of transplanting, and afterwards as they may require it. The fields are weeded regularly once a month. The first year nothing is taken from the plants, but after that they yield for years, without intermission, a double crop. At each cutting, about nine inches are taken from the top shoots of the plants. The two crops are gathered in Baisákh (April and May) and Kátik (October and November) of each year. The labourers employed in planting out the *mehdi*, instead of receiving their wages in money, are liberally fed as long as the operation lasts, and a distribution of sweetmeats takes place when it is over. The season for sowing is during the month of Baisákh; that of transplanting, Sáwan (July and August). A year's produce of an acre of well-grown *mehdi* is 20 maunds of dry leaves, of which about 6 maunds are gathered in the spring, and the rest during the autumn months: and the same plants continue to yield for 20 or 25 years.

Mehdi (lawsonia inermis)

The selling price of the leaves averages a rupee for 9 seers, so that the value of the crops per acre is about Rs. 90. After the first year, the expenses of cultivation do not much exceed those of other crops. The produce of the *mehdi* grown in this district is nearly all carried across the Jhelum, and sold in the northern districts, especially Pesháwar ; some goes to Delhi, and there is some export to Persia and Arabia. Before the war, Germany also was a customer. The *mehdi* crop of Bhera is said to be worth about a lakh of rupees a year. Besides the use to which the leaves are ordinarily put, *viz.*, as a dye for the hair, hands, &c., they are also given to goats and sheep, when attacked by itch.

Water-melons.

In the Thal, in favourable years, water melons are very largely grown on the sandhills round the villages and hamlets. The seed is often simply scattered over the sand, and the rain and sun do the rest. When the season is good the melons are produced in great quantities and of a large size. They are known as *kalakh*, *titak*, *ror*, or *pitta*, according to the different stages of their growth. A camel-load sells in Núrpur for four annas, and in Khusháb for a rupee or one rupee four annas. Muhabpur grows a superior quality which fetch as much as an anna each in Girot. In the villages any one is welcome to eat as many melons as he likes, provided he does not take away the seed

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Agriculture and Irrigation.
Water-melons.

which sells at 24 seers per rupee. The seeds are ground, sifted, mixed with flour and made into cakes, which are largely eaten by the people. Melon seeds are also exported to Lahore and Amritsar, where their kernels are sold by native druggists at $1\frac{1}{2}$ seers per rupee as a medicine (*maghz tarbúz*).

Opium.

Poppy cultivation was at one time a source of considerable wealth to the district, especially to the villages round Shahpur, and to Katha Masrál and Saghrál at the mouth of the Vahi gorge. To quote Mr. Wilson :—

"The following figures will give some idea of the extent and value of the crop :

Year.	Area cultivated	Opium extracted	Average outturn per acre.	Wholesale price per seer.	Average cess realized.
	Acres.	Mds.	Seers.	Rs.	Rs.
1860	708	...	...	...	*Nil.*
1866	3,000	450	6	10	*Nil.*
Average of five years ending 1889.	2,830	413	6	13	6,221
1889-90	4,005	840	8	13	8,962
1890-91	3,535	707	8	12	7,510

The average outturn per acre may be taken as six seers and Rs. 8 per seer as the price of the fresh juice (which loses one-fourth of its weight in drying , giving Rs. 48 as the average price of the opium of an acre of poppy. Adding to this Rs. 10 as the value of the poppy-seed gives the total value of the produce as Rs 58 per acre. The crop is generally sold standing to Khatri speculators at a price averaging about Rs. 50 per acre but varying from Rs. 20 to Rs. 80 or more according to the promise of the outturn."

The loss of a crop worth nearly 2 lakhs of rupees is a small set-off against the many improvements that have taken place.

Causes reducing the outturn of crops.

When a crop has been sown, its produce even on irrigated land depends very much on the quantity and opportuneness of the subsequent rainfall, and, as that is exceedingly variable in this district, the outturn varies greatly from year to year and from village to village. The crops are also apt to be choked by weeds, of which the most troublesome are the *leha*, a thistle-like weed, which especially infests lands flooded by the river, the

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Causes reducing the outturn of crops.

pohli or yellow star-thistle, and the onion-like *bhúkát*, which is very common on poor lands irrigated from wells. The peasants rarely take sufficient trouble to eradicate these weeds which consume a large proportion of the nourishment in the soil. In the riverain mice multiply in dry years and devour the kernel of cotton seed and other crops. Birds and insects of all kinds greatly reduce the outturn of the crops. In the *kharíf* harvest considerable trouble is taken to drive away the birds from the ripening *jowár* and *bájra* crop, and when locusts make their appearance, a campaign is organised against them and myriads of them are killed; but against the ravages of other insects the peasant is almost helpless. An account of recent visitations of locusts will be found in Chapter I, where also the boll-worm and other insects that attack the crops are mentioned. Wheat often suffers in cloudy weather from rust (*kungi*) which greatly reduces the size and weight of the grain; hot winds also cause the grain to shrivel up and are especially injurious in the lands lying along the foot of the Salt Range. Hail-storms often do great but partial damage; and an account of a very destructive storm will be found in Chapter I. White ants (*sivvi*) attack the roots of many plants, and weevils (*ghun*) consume much of the ill-garnered grain. Altogether the quantity of food that reaches the mouths of the people is no large multiple of the seed that is sown.

Total area and area under cultivation.

The figures for total cultivated and irrigated areas will be found in Table 18. According to the professional revenue survey made at various times between 1853 and 1865 the total area of the district is 4,791 square miles; according to the recent remeasurements made by the patwárís it is 4,800 square miles, of which in 1915, 1,187 square miles were returned as unculturable, 1,588 as culturable, and only 2,024 square miles or less than a half of the total area of the district as under cultivation. Alterations in the district boundary described in Chapter I, Section B, have resulted in a total gain of 94 square miles since 1893.

According to the records of regular settlement which were compiled at different times between 1855 and 1864, the total cultivated area excluding land recently thrown out of cultivation was 304,570 acres. The area under cultivation has gone on steadily increasing year by year and was returned in 1888 as 612,659 acres, in 1893 as 687,217 acres, and in 1915 as 1,295,409 acres, or much more than four times the area of regular settlement. During the last fifteen years cultivation has increased at the average rate of more than 33,000 acres per annum. The reason for the great increase between first and second settlements was the increased security brought by settled conditions, the modera-

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Total area and area under cultivation.

tion of the demand, above all the sinking of wells and excavation of inundation canals. These factors have all continued in operation, and, in addition, the Lower Jhelum Canal has been con structed, and the possibilities of gram cultivation in the Thal have been discovered. It is on the unirrigated lands that develop ment is now proceeding most rapidly, and it is worth noting that the 1,194 square miles recorded as unculturable include an area of about 470 square miles which would be culturable, if it were not reserved forest.

Details of increase in cultivaton.

The increase in cultivation on each of the main classes of land has been as follows :—

Area in acres at	*Cháhi* and *Cháhi-nahri*	*Nahri* and *nahri-jhalári*	*Sailáb*	*Bárani.*	Total.
Regular Settlement ...	131,545	2,192	45,625	125,508	304,870
1893-1894	236,524	87,654	69,838	293,201	687,217
1914-15	137,363	785,805	61,701	310,540	1,295,409

Out of the *nahri* area 673,789 acres are on the perennial canal, 110,539 are on the inundation canals and *kharíf* distributaries, and 1,477 on perennial streams in the hills. The decrease in *sailáb* is due to the transfer to Gujrát District of riverain villages both on the Chenab and on the Jhelum. The great decrease in *cháhi* is due to the supersession of wells by canals, especially in the Chenab and Ara circles, already noticed in Chapter I—A.

The Sargodha Seed Farm.

In the early days of the Lower Jhelum Colony, Mr. Hailey started a farm at Sargodha for the dissemination of pure seed among the colonists ; but little was accomplished until, in 1913, the farm was placed under the control of the Director of Agriculture, and managed by an Agricultural Assistant, with a *muqaddam*, a *beldár*, and one pair of bullocks to carry out field operations. Half a square of very poor land is cultivated by the staff, in order to demonstrate the extent to which natural disadvantages can be overcome by improved methods : the remaining five squares are made over to tenants, who put in practice the teaching of the Department. The most important results obtained so far are as follows :—

(*a*) *Distribution of improved implements* :—During the past 2½ years, peasants have been induced to purchase 50 Raja and 60 Meston ploughs, 10 spring toothed harrows, 12 fodder-cutters, and 1 Raja reaper, and there is good reason to believe that all these implements will rapidly increase in popularity.

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The Sargodha Seed Farm.

(*b*) *Selection of suitable types of seed.*—So far as present experience goes, the most important results can be obtained by encouraging the use of wheat, type No. 11 (*Lál Kasárwali*) and cotton, type No. 4 F. American. Of the former 3,500 maunds were sold to peasants for the 1916 crop, and it fetches at least 2 annas per maund more than the '*ghoni*' variety. The selected American cotton in 1915 sold at Rs. 10-11-3 per maund, the current rate for common *Desi* cotton on the same date being Rs. 7-8-0. Australian *bájra* also has just been introduced, and is likely to become very popular.

Agricultural Association.

An agricultural association was formed in December 1915, under the Presidentship of the Deputy Commissioner. Hitherto the objects aimed at have been the lending out on approval of improved implements and the organization of public opinion with a view to minimising the extortions of petty officials. Already good results have been obtained, and with proper encouragement the association should prove eminently useful.

Other agricultural developments.

In the District Board garden at Sargodha and the "Company garden" at Shahpur, experiments are being made with oranges from Gujránwála. At Sakesar the Deputy Commissioner looks after a few olive trees planted by Mr. Mitchell of Kashmír, but so far not much success has been attained. Potatoes are being tried at Kathwai and Uchhali, and ought to do well in the Salt Range, but the Awáns are slow to take up a new crop. The Economic Botanist has endeavoured to interest the owners of large palm-groves in the south of Khusháb Tahsíl in Basra date-palms, and they are beginning to respond, but have so far not planted any. An attempt might also be made to start lucerne on *rappar* lands near the river, which are incapable of producing ordinary crops. There are several small gardens kept up by the District Board in various places, but between them they produce very little eatable fruit or vegetables: the garden at Sodhi Jaiwáli is the best.

Government loans.

Table 20 shows the extent to which use is made of the Land Improvements and Agriculturists Loans Acts. Considering the large number of wells in the district, not much is borrowed for their construction, and, as Co-operative Credit Societies multiply, probably less use will be made of the Act than ever. Occasionally an Awan borrows money for the construction of an embankment, but generally this kind of work is done by the system of labour co-operation known as *Wangár*. In times of fodder-famine, large sums are distributed to cattle owners and when drought has greatly reduced the stocks of grain money is advanc-

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ed for the purchase of seed. Thus Rs. 64,525 were advanced in 1911-12. As a rule repayments are punctually made, and the benefits of both Acts are clear.

Co-operative Credit Societies.

An entirely new influence, which promises to enlarge the minds and improve the prospects of an adult population far beyond Government's sphere of influence, has come into being in the last seven years in the shape of Rural Banks, or Co-operative Credit Societies. The first Societies of the district were registered in 1909, and in two years the advantages of the co-operative idea were clearly recognized in the most progessive Tahsils—Sargodha and Bhera; even as late as 1914 there were only 4 Societies in Shahpur and none in Khushâb. The figures printed in the margin will show what substantial progress had been made by 31st July 1915. It has only been found necessary to wind up 4 banks so far, so it is clear that due caution has been observed in expanding the scope of the movement. In addition to the Village Societies (technically known as Class I, Unlimited) there is a Central Bank at Sargodha and a Central Union Bank at Chak 33 S. B. known as the Pindi Chiman Union Bank. The former was opened on 21st April 1910, with 182 shareholders, and a working capital of Rs. 41,838; it has now 196 members, and a working capital of Rs. 1,45,196; in 1915 it made a net profit of Rs. 5,135, and paid a dividend of 8 per cent. The Pindi Chiman Union Bank opened on 11th August 1911, with 7 shareholders, and a working capital of Rs. 14,579: in 1915 the capital had increased to Rs. 26,534, and the profit amounted to Rs. 788. There is also one non-agricultural society (Class II) at Bhera which has 39 weaver shareholders. This was registered in February 1911 with a capital of Rs. 467. In 1915, the capital amounted to Rs. 4,361; the gross profits to date were Rs. 1,590, out of which Rs. 619 went to the expenses of management leaving Rs. 971 net profit, which has been added to the working capital. The dividend on shares has averaged no less than 56 per cent. per annum, and the enterprise seems to be doing remarkably well.

Tahsîl.		Number of Societies.	Number of members.	Working capital.
				Rs.
Sargodha	...	72	2,027	4,24,741
Bhera	...	60	1,691	1,49,150
Shahpur	...	20	654	19,909
Khushâb	...	7	219	7,498
District	...	159	4,591	6,01,298

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Co-oerative Credit Societies.

A similar society was started in Khusháb in 1911, with 86 share-holders and Rs. 2,231 capital, but after about a year and a half, the society, owing to deficient cohesion and enterprise, ceased working and the capital which had reached Rs. 5,854 was refunded. All Societies are supervised by the Registrar of Co-operative Credit Societies whose head-quarters are at Lahore, and who enjoys the services of an Assistant for the Western Range of the province. There is an Inspector at Sargodha, with 3 stipendiary and 2 honorary Sub-Inspectors working under him. The duties of the official staff are advisory and regulative ; management is so far as possible left to the members. It is for this reason that the movement is probably even more important as an educative factor than as an economic revolution.

Indebtedness.

The exact amount of unsecured debt due from agriculturists to money-lenders is not ascertainable but it undoubtedly amounts to a formidable total. In the great majority of cases however indebtedness is entirely due to extravagance or thriftlessness. Weddings are of course the occasion of much unnecessary outlay ; litigation not infrequently involves borrowing, and some of the better class families are apt to set themselves too high a standard of hospitality. There is a regrettable tradition that it is unseemly for a man of any status to accept payment for the supplies consumed by officials on tour, and this has impoverished several worthy families, in much frequented villages.

Rates of interest.

When an agriculturist resorts to the money-lender, he is in most cases entirely unable to arrange reasonable terms. Interest at 2 per cent. per month is quite commonly agreed to, and 1 per cent. per month is considered very moderate. Up to the time of the passing of the Alienation of Land Act, the interest was always allowed to accumulate until the creditor could insist on the debtor parting with some of his land. The advantage of co-operative banks consists partly in the reduction of the rate of interest charged to borrowers to something between $9\frac{1}{2}$ and $12\frac{1}{2}$ per cent. per annum, and partly in the steps taken to insist on punctual repayment. The rate of interest charged by Central Banks is generally 8 per cent. There can be no doubt that a little determination on the part of the creditors would wipe out most of the unsecured debt in a very short space of time.

Debtors and creditors.

After the transaction has been completed, the creditor is generally in an even stronger position than before : Mr. Wilson's description of the various devices for getting more than the pound of flesh is worth repeating.

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Debtors and creditors.

"The better class of Hindu and Sikh bankers and shopkeepers keep three account books (*vahi*), (1) the day-book (*suhr, parchun* or *bandi*), in which all transactions are recorded day by day as they occur; (2) the cash-book (*rokir*) in which only cash transactions are entered as they occur; and (3) the ledger (*kháta vahi* or simply *vahi*), in which each client's account (*lekha*) is written up from the day book at the shop-keeper's leisure. The great majority of shop-keepers, however, keep up only the ledger, making entries in it from memory or from rough notes which are destroyed, so that there is no means of checking the entries. The ledger (*vahi*) is kept in the form of loose leaves fastened together lengthwise in such a way that a leaf can easily be extracted without detection. Each page (*panna*) has its number (*angg*), and it is usual, on opening a new ledger, to get a Brahman to imprint on the seventh page a coloured picture of Ganesh and his rat, adding the invocation '*Om Svasti Ganeshaya nama*' with the date and a blessing. The account of each client shows on the left side the debits or out-goings, and on the right side the credits (*agit*). Generally once a year the balance (*baki*) is struck, interest (*veáj*) charged, and the net balance carried forward to a new account. As the peasant who has his dealings with the shop-keeper (*kirár*) is often utterly ignorant of accounts and very careless, he is often taken advantage of by the shop-keeper, who will, as occasion offers,—

(1) dole out old grain of sorts for food purposes in the cold season and take repayment at harvest time, a few months later, in wheat or its money equivalent, plus from 25 to 50 per cent. interest ;

(2) exact full repayment on the threshing-floor, leaving the customer insufficient grain wherefrom to pay his land revenue, and feed himself till next harvest ;

(3) a month or so later pay his debtor's land revenue and taking advantage of his necessity, charge him at least the highest average rate for money lent ;

(4) take one-anna per rupee as discount (*katt* or *gadd chhora*) when making a loan, but charge interest on the discount ;

(5) cut six months' interest out of a loan, and record the gross sum as a loan free of interest for six months ;

(6) cause the debtor to go before the Sub-Registrar and state that he has received the whole loan in cash, whereas in fact the amount was chiefly made up of simple and compound interest ;

(7) misrepresent debits in the ledger by entering inferior grains as if wheat ;

(8) allow no interest on repayments in kind and either no or short interest on credit in cash, and cause the customer to believe, when he is making a payment to account, that a concession of grace has been made when a small remission is credited to him out of the interest due (*chhot* or *mor*) ;

(9) generally keep accounts in a loose unintelligible way which makes the separation of interest from principal impossible ;

(10) keep only a ledger, plus sometimes a sort of day-book in loose sheets or book form, and write up the former at any time.

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Debtors and creditors.

(11) strike the balance in a casual way, naming as present one or two witnesses either brother lenders or men of the class known as 'four anna witnesses ;'

(12) charge a full year's interest on grain or money, lent a few months or even weeks before the striking of balance."

In the Southern Thal, the peasants regularly deposit their crops and wool with the village shop-keeper, and obtain from him sufficient for their daily needs; the balance of money due from one to the other is struck once or twice in the year, and, whatever the harvest has been like, is always in favour of the shop-keeper. This is the *reductio ad absurdum* of bucolic simplicity. It must however be admitted that there are some peasants who borrow money with the deliberate intention of avoiding repayment; when it comes to executing a decree, the law is by no means always on the side of the creditor.

Most of the Musalmáns of this district, if they are in a position to lend money at all, do so on mortgage: loans with interest in cash are very uncommon. In fact the religious scruples of Islám in the matter of usury still deter many from joining in the co-operative movement. Khojas and Piráchas however have no objection to ordinary money-lending.

The Shádi Funds.

The objection to a fixed rate of interest does not prevent the peasants from indulging in a wild speculation. In the winter of 1911 a great part of the riverain and Salt Range was infected with the 'Shádi Fund' craze. This was professedly a scheme of insurance against marriage-expenses! Actually it was a swindle exactly similar to Mr. Montague Tigg's Anglo-Bengalee venture in "Martin Chuzzlewit." So long as subscriptions were coming in, claims on marriage were handsomely met: the Directors (among whom were a few agriculturists of some standing) pocketed considerable fees, and innumerable agents took large commissions. The inevitable smash was not long delayed, and although the resulting criminal cases broke down, most of the funds paid up some annas in the rupee, and it was generally stated that on the whole the bulk of the loss fell on persons of the *Kirár* class. But the peasants became more suspicious than ever of the co-operative movement, which was just beginning to make some headway.

Alienations of land—(a) Sales.

At last settlement Mr. Wilson drew a very gloomy picture of the process by which the peasant-proprietors were being ousted from their ancestral lands by a ruthless crowd of shylocks. He calculated that in three years one per cent. of the privately owned land passed by sale into the hands of money-lenders, at a price which had risen from 10 to 20 rupees per acre. Table

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Alienations of land—
(a) Sales.

21 shows the later chapters of this tale. The whole may be summarized thus :—

Average of sales per annum.	Number of sales.	Acres sold.	Price per acre.
			Rs.
1870—1879	133	2,508	15
1880—1889	393	5,437	15
1890—1899	1,084	10,299	28
1900—1909	1,273	9,359	51
1910—1914	1,579	8,799	100

In the year 1900-01 no less than 22,628 acres were sold, of which 15,641 were in the Bhera Tahsíl; and in the next year 10,867 acres, of which 7,383 were in Bhera. The Alienation of Land Act came into force during this last year, and the effect was immediate. For the Bhera riverain it was only just in time—a very large area had passed beyond recall to men who knew nothing about agriculture except its profits. Since 1901, although the area transferred annually is still considerable, at least the vendees are practically all men with some knowledge of land, and some claims to live on the soil. At present the bulk of the transfers are taking place in Khusháb Tahsíl, and there the land is of comparatively little value and most of the owners have more than they can manage.

(b) Mortgages.

Mr. Wilson pointed out that in the majority of cases a mortgage to a money-lender was practically equivalent to a sale. The history of mortgages is this :—

Average of mortgages per annum.	Number of mortgages.	Acres mortgaged.	Mortgage-money per acre.
			Rs.
1870—1879	329	7,820	9
1880—1889	1,266	19,349	9
1890—1899	2,277	20,393	18
1900—1909	1,165	6,569	34
1910—1914	1,645	7,382	54

Here the improvement is really startling; the peasants all assert that it was not till the Alienation of Land Act was passed that they realized the importance of retaining possession of their lands, or only parting with it for full value. The slight rise in the

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Alienations of land—(b) Mortgages

last five years may be partly attributed to the fact that settlement operations have brought a number of old mortgages to light. It is to be noticed that the majority of the mortgages are now taking place in Khusháb Tahsíl, but there one good harvest renders possible extensive redemptions. The progress of redemptions has been as follows :—

Average of redemptions per annum.	Number of redemptions.	Acres redeemed	Mortgage money per acre.
			Rs
1870—1879	69	1,652	5½
1880—1889 ...	304	5,724	6
1890—1899	1,217	13,188	13
1900—1909	1,490	10,971	19
1909—1914	1,959	12,947	23

Here again the improvement is obvious; for even if we assume (what is not the case) that all the land sold was previously mortgaged, and so ought to be deducted from the area redeemed in order to show effective redemptions, we find that in the decade 1890—1899 over 30,600 acres were annually sold and mortgaged, as against 13,000 redeemed; while in the succeeding decade only 16,000 were annually sold and mortgaged as against 11,000 redeemed; and in the past five years 16,000 have been sold and mortgaged as against 13,000 redeemed. And it must be remembered that much of the land now being sold and mortgaged is waste land, which the owners are unable to cultivate. Thus it was found in Khusháb Tahsíl that though between settlements the non-agriculturists had gained an area of 3,822 acres net from the agriculturists, the latter had actually recovered possession of 1,875 net acres cultivated. The introduction of Co-operative Credit and the Redemption of Land Act have both given a new impetus towards emancipation of the peasants, and the present condition of affairs may be regarded as decidedly satisfactory.

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Existing mortgages.

The total effect of transfers upon the amount of land held under mortgage with possession now as compared with previous settlements is this :—

Period.	Number of mortgages.	AREA UNDER MORTGAGE IN ACRES.		Revenue assessment of mortgaged land.	Percentage of assessment of mortgaged land on total assessment of the district.	Percentage to total cultivated area of area held under mortgage.
		Total.	Of which cultivated.			
				Rs.		
At regular Settlement, 1856—1858.	3,107	38,008	21,243	24,243	6	7
In 1893	14,627	158,642	80,766	74,362	13	12
In 1914-15	17,062	126,480	75,113	45,488	2	6

The area held by non-agriculturists in 1914-15 was 84,695 acres, of which 47,007 were cultivated and paid revenue amounting to Rs. 30,460, or 4 per cent. of the revenue of the district. In 1893 non-agriculturists held 58,500 cultivated acres, paying Rs. 52,053 as revenue, or 9 per cent. of the total assessment. It must be remembered that some of the area now mortgaged will automatically revert to the possession of the owners by mere lapse of time, without any payment of money. Nearly 4,500 acres cultivated are mortgaged in this way in the Bhera and Shahpur riverain. It is in the riverain that mortgage is still most general. In the Bhera Jhelum Circles it covers 13 per cent. of the cultivated area, in the Shahpur-Jhelum 12 per cent. and in the Khusháb-Jhelum 15 per cent.

Sale and mortgage values.

The figures in the foregoing paragraph indicate that the value of land has nearly doubled since the passing of the Alienation Act, and has trebled since settlement. Mortgage values are little more than half sale values, but in the latter case pre-emption is a factor that tends to obscure the truth. Recent sales of land on the Jhelum Canal indicate a value of about Rs. 4,500 per square, or over Rs. 150 per acre. Well lands in the riverain range between Rs. 120 and Rs. 250 though specially good lands would of course command a much higher price. Inundation canal land would fetch from Rs. 80 to Rs. 150 according to quality, and *sailáb* about Rs. 150. Of the *ődráni* soils very high prices are paid for the best fields on the hill torrents, and it would be difficult to buy a good average '*hail*' field for less than Rs. 400 an acre. On the other

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Sale and mortgage values.

hand it would probably be possible to buy land in the Thal for Rs. 50 or less, and for intermediate grades of land any price between these extremes might be asked for. On the most modest computation, the selling value of the proprietary and colonist rights in the district is now 18 crores of rupees; Mr. Wilson estimated it at 3 crores.

Buyers and Sellers.

The professional money lender is now as good as barred from the permanent acquisition of land, except from his own kind. Not that he really has much to complain of, as he made the very most of his opportunities up to the very day that ended his golden age, and still holds land in value out of all proportion to what he actually paid for it. The persons who have to some extent occupied the market thus vacated are the Tiwána Maliks and other wealthy land-owners, and the men who have saved up some capital out of their military pay. But probably the bulk of the transfers now taking place are between ordinary peasant-farmers, and the general effect is to transfer land from the inefficient or the unfortunate to those who are more likely to make the best use of it. Not without reason is the name of Mr. S. S. Thorburn held in grateful remembrance.

Cattle.

The agricultural stock of the district has been carefully enumerated at various times (see table No. 22), and the following statement gives the results of the more important enumerations :—

Year.	Cows, bullocks and buffaloes of all ages.	Sheep and goats.	Horses and ponies.	Mules and donkeys.	Camels.	Yokes of plough bullocks.
1869	154,163	172,883	3,485	9,495	14,908	33,535
1890	380,794	308,883	6,636	19,347	16,319	53,546
1900	469,784	440,679	10,086	23,854	18,058	68,418
1910	628,441	479,685	27,082	39,794	16,360	85,426
1914	694,901	460,856	31,516	44,862	18,141	102,055

The details of the horned cattle in the 1914 census were as follows: —

Bulls and bullocks	...	204,110
Cows ...	... ...	179,115
Male buffaloes	... ...	20,513
Cow buffaloes	... ...	120,511
Young stock	... ...	170,652

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Agriculture and Irrigation.

Cattle.

It is to be noticed that horned cattle are more than four times as numerous as they were at regular settlement, and nearly twice as numerous as they were at second settlement. Bullocks and cows have each increased in number by about 50 per cent since second settlement, while buffaloes and young stock have more than doubled. Sheep and goats increased by 150 per cent between 1869 and 1900, but since then have not made much progress. Horses and ponies are nearly 10 times as numerous as they were in 1869, and more than 3 times as numerous as they were 15 years ago. Mules and donkeys double their numbers every twenty years. Camels are not making very much progress, though, when it is considered to what extent their favourite haunts have come under the plough, it is perhaps suprising that they have not lost ground.

At last settlement Mr. Wilson calculated that the live-stock of the district were worth 85 lakhs of rupees.

A similar calculation now gives the following result :—

Animals.	Average value.	Total value.
	Rs.	Rs.
Bulls and bullocks ...	40	81,64,400
Cows	40	71,64,600
Male buffaloes	40	8,20,520
Cow buffaloes	80	96,40,880
Young stock	15	25,59,780
Sheep	5	16,45,460
Goats	5	6,58,820
Horses and ponies	100	31,51,600
Mules and donkeys	15	6,72,930
Camels	100	18,14,100
		3,62,93,090

Of course in years of scarcity like the present, prices drop below these averages, and animals change hands for little more than the value of their hides and bones. But in a good year it would be impossible to replace the existing live-stock for less than 3 crores of rupees. The following accounts of special species have been kindly compiled by Mr. Medows, Civil Veterinary Department :—

There are numerous and mixed types on account of many strains having been brought in by colonists and traders. CHAP. II-A. Agriculture and Irrigation. Cattle.

The original breeds appear to have been the Bár and the Thal breeds. The former are medium-sized cattle rarely higher than 48 inches at the shoulder with narrow chests and thick skin and over-developed dewlaps and sheaths usually grey or light red in colour. Some of the cows are said to give up to 8 seers of milk, cows sometimes fetch up to Rs. 100, bullocks rarely more than Rs. 80. The Thal breed are of much smaller size, but otherwise they resemble the Bár breed though they are of more compact and even build. The cows give up to about 3 seers of milk, cows fetch up to Rs. 40, bullocks up to Rs. 25. This breed is still numerous though the Bár breed has become scarce. In the Sún *iláqua* the cattle are almost all of Dhanni type, strong, fast, and hardy and usually of piebald colour. The cows are poor milkers. The bullocks sometimes sell up to Rs. 170, cows rarely more than Rs. 50.

The effect of the District Board bulls is now becoming very noticeable. The bulls supplied are usually of the Hissari breed, but in the Khusháb Tahsíl which is too poor to support Hissaris and in localities where colonists from the northern districts shew a preference for their own breed, Dhannis are supplied. Hissari cross bullocks fetch up to Rs. 180 and Dhanni crosses up to Rs. 150.

There is no very important cattle fair anywhere in this neighbourhood, although a good deal of buying and selling is done at the Sargodha and Shahpur horse-fairs. Considerable numbers of young stock are sold, especially in a dry year, to itinerant cattle-dealers, who take them to Ráwalpindi or Pesháwar.

Buffaloes.

There has been an extraordinary increase in the number of cow buffaloes, partly owing to the increase in cultivation and partly, no doubt, to the increased prosperity of the people. They are found chiefly in the Cis-Jhelum part of the district and are often stall-fed but in the hot weather are driven down to the river *belas* where they find a nutritious food in the *kah* grass (saccharum spontaneum).

There does not appear to be any well-defined breed; strains from many localities have been mixed together by the colonists. Generally the buffaloes are of moderate size and fairly well shaped.

Females sometimes sell for as much as Rs. 230 but males seldom sell for more than Rs. 80.

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The cattle-owners of the district derive a large income annually from the sale of *ghi*, the price of which had risen from Rs. 8 per maund before annexation and Rs. 13 per maund at regular settlement to an average of Rs. 23 per maund at second settlement, and is now over Rs. 40 The amount of milk given by the half-starved cows of the district is often over-estimated. While good cows giving 8 seers of milk a day or more can sometimes be procured, the average cow of the district probably does not give more than 1½ seers of milk per day for six or nine months of the year. Similarly a very good buffalo-cow will give as much as 13 seers of milk a day, but the average buffalo-cow of the district probably does not give more than 3 seers a day for 11 months. One seer of cow's milk gives an ounce of butter and one seer of buffalo's milk two ounces, and a third of the weight of butter goes in the process of making it into *ghi*; so that a cow on the average gives about 6 seers of *ghi* in nine months, and a buffalo-cow about 30 seers of *ghi* in 11 months. A large quantity of *ghi* is annually exported to Peshâwar, Râwalpindi, Amritsar, Dera Ismail Khan and Karâchi.

Cow hides sometimes sell for as much as Rs. 35 per maund, and buffalo hides for Rs. 25

Diseases of Cattle.

Large numbers of cattle are annually carried off by disease, and the people are very careless in protecting them from contagion. Outbreaks of rinderpest and foot-and mouth disease are of almost annual recurrence, and the sick and healthy animals may often be seen standing together, or shut up in the same cow-house. The following account of the common diseases with their native names and remedies is taken from a Civil Veterinary Report on the cattle of the Shahpur District furnished by Veterinary Surgeon J. A. Nunn in 1884 :—

Rinderpest—thaddián, chechak, pir máta, piriyán, dhakka wáh and purki.—Treatment : 1st, sulphur, salt and ginger in equal parts are given as a drench ; 2nd, nitre, camphor and pounded *dhatúra* seeds, mixed with *gur* and water ; 3rd, in first stages, milk and *ghi* is given as a drench, afterwards *kikar* leaves are mixed with butter into a paste and given as an electuary ; 4th, *katha* (*acacia catechu*, the native *catechu*) is mixed with country wine as a drench.

Foot-and-mouth disease (*munh khur*).—*Treatment, &c. :* salt and powdered *ajwain* (*liqusticum ajowan*) seeds are given as a bolus when ulcers are only seen in the mouth. When the feet are attacked, *sandhúr* (red oxide of lead) is made into a paste with lamp-black and applied locally. Another prescription is salt, sweet oil and *ghi* given internally.

Anthrax (*garlu, satt*) affects cattle. The symptoms described coincide with those of black quarter, *viz.*, that it chiefly attacks animals after rain, when there is a great spring of fresh grass or when they are pastured on

marshy ground. Swellings appear on the various parts of the body, and the animal quickly dies. It is described as being incurable, but sometimes treatment is tried, by giving large quantities of *ghi* and milk, and firing the swelling.

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Gloss anthrax or malignant throat (*galghotu*).—Both diseases are described by this name, but more generally it is gloss anthrax that is meant. It is considered very fatal, and the only treatment adopted is the application of the actual cautery to the trachea, and round the throat under the jaw.

Splenic apoplexy (*tili and huka*).—The only treatment adopted is bleeding from the inside of the nostrils and making an incision on the bridge of the nose.

Rheumatism (*dabak, tak*).—Rheumatism in horned cattle is met by the following treatment. Asafœtida (*hing*) and *guggal* or miense (*dalomiœa macrocephala*) mixed in flour is given and the back rubbed with dry *ajwain* (*liqusticum ajowan*). The patient is kept in a warm room, and bleeding had recourse to from the ears and tail.

Colic (*dard shikam or súl*).—*Treatment:* Country spirit, tobacco, *ghi*, *gur*, salt and *ajwain*, mixed with vinegar and water in which leather has been soaked. *Ghi* and milk given in large quantities is said to be a certain cure.

Hoose or husk (*dháns*)—*Guggal* (*dolomœia macrocephala*), *asafœtida* and onions made into a bolus with barley flour is given, about a *chhaták*, and the smoke of a burning black rag is blown up the nostrils.

Chronic indigestion (*jágír*).—All grain is stopped, and ground ginger, salt, *anola* (*emblica officinalis*), *ajwain* is given in water.

Tympanitis (*patha lag gea*).—*Gur* and *bájra* (*penicillaria spicata*) flour are given as a drench, and the animal is bled underneath the tongue.

Pleuro-pneumonia contagiosa.—*Phepri* or *khulak*,—*mehdi* (*lawsonia inermis*), *katíra* (*cochlospermum gossypium*) (or *salix babylonia*), *ajwain*, *gur* and water are given internally.

Prolapsus uteri (*dháns or havans*).—The organ is anointed with oil and a rope truss applied.

Red water (*hœmato albuminuria*).—*Loya or halla, katíra* (*cochlospermum gossypium*) is soaked all night in an earthen vessel and the liquor given as a drench with barley flour gruel.

Tetanus (*trismus*) (*mukh band*).—A line is drawn all round the body commencing at the nose, with a hot iron, and the following drench given. *Majíth* (madder, *rubia cordifolia* or *R. tinctorum*), *haldi* (turmeric, *curcuma longa*) and *gur* mixed with water.

Umbilical hernia (*phor*).—The hernical sac is fired and *peva* (cotton-seeds and mustard oil) given as a drench.

Bilious fever (*Sirdoi*).—Salt, *ajwain* and water coloured with *mehdi* (*lawsonia inermis*) is given internally.

Diuresis (*dhakútra*).—*Katira* (*C. gossypium*) and water coloured with *mehdi* are given internally.

Mange (*khurak*).—Sulphur is given internally in the food and the body is washed with soft soap.

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Agriculture and Irrigation.

Camels.

Unlike every other kind of live-stock, the number of camels has scarcely risen since regular settlement, owing partly to the development of cultivation, the fodder grown on cultivated lands being more suitable for feeding horned cattle than camels, but chiefly owing to the development of roads and railways which have lessened the demand for camels as beasts of burden.

There are two distinct breeds of baggage camels, the Bár breed—large and heavy animals averaging nearly seven feet in height, with wide chests and strong bone and slow paces, usually grey or fawn coloured—and the Thal breed—smaller and lighter with straight shoulders and narrow quarters, usually brown or fawn coloured and often weakly and poorly developed from having to live mainly or entirely on *lána*. The Bár breed bring up to Rs. 180 and the Thal breed up to Rs. 150. The camels used for riding purposes are rarely bred locally but are usually bought from traders at early ages and used for riding from about four years of age, up to about 6, when their paces become slower and shakier and they are then used for baggage work. The female camels are little used as beasts of burden, but are allowed to roam about the jungle with their young; while the male camels are annually in the cold weather employed in the carrying trade sometimes at a great distance from their owners' homes. A considerable number are employed in carrying salt from the mines at Wárchha. The profits of camel-breeding and camel-hiring, however, are not what they used to be, except in war-time. A camel reaches maturity at about 8 years, is fit for work up to 15 years, and seldom lives over 20 years.

The history of the young camel (*toda*) until fit for sale may briefly be described as follows :— The stallion or bull-camel is allowed to run with the herd of "*dáchís*," probably numbering 25 to 30, from November to January. The period of gestation is 12 months and *dáchís* therefore drop their foals in the following November to February. The young camel drinks his mother's milk alone for about six months and is known during this period as "*Liyara*." During the next six he gradually learns to graze but depends to a certain extent on his mother's milk for sustenance: during this time he is known as "*Kotelah*." The *dáchi* is now again put to the bull and the young camel is weaned and is known as "*Mazzát*" for another year. After this he becomes *Trihán* (3 years old), *Chhatr* (4 years old), *Doak* (5 years old), *Chauga* (6 years old), *Chhigga* (7 years old), *Nesh* (8 years old), *Parmosh* (9 years old). Then *Ek sal ka nesh*, *do sal ka nesh*, and so on. A male camel is also called *lihak* and a female *puraph* from two to four years old. A male camel

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Camels.

of about thirteen is called *armosh*, and after fifteen a male is called *Khámba* and a female *jharot*. The native camel-owner will teach the "*Trihan*," if well grown, to bear light burdens, which are increased as he becomes "*chhatr*" and he carries a full-load of 5 maunds by the time he is *Doakk*, if not before. A well-grown "*Chauga*" or "*Chhigga*" is considered to be well up to 7½ maunds. The poor or avaricious owner, over-anxious to get work from his stock as soon as possible, often works his animals too young or gives them loads to carry which they are not fit to bear, with disastrous results. Owing also to scanty grazing, due perhaps to shortage of rain, etc., the *dáchís* and young are often half starved, and many a promising youngster suffers in consequence.

Young are sold as "*Mazzat*," or even as an old "*Kotelah*" to camel-traders and are reared by their new owners. The market price for good class "*Kotelah*" or "*Mazzat*" varies from Rs. 30 to Rs. 40 and Rs. 50 to Rs. 60 respectively.

Camel's milk, from which butter cannot be made, is drunk by the camel-breeder; camel's hair (*milass*) is used to make ropes and coarse sacks (*bori*); and from camel's hide (worth about Rs. 2 per hide) are made the large jars (*kuppa*) in which *ghi* is carried. The camel, although he can eat most plants and find food for himself in almost any jungle, is particularly fond of the salsolas (*khar* or *lána*) and of the leaves of the acacia (*kikar* or *phulah*). He is a delicate animal and is subject to many diseases. Some of them are described as follows by Mr. Nunn :—

Anthrax (*chhalli*) is described as being most contagious and destroying hundreds of camels annually. The symptoms are red, *i.e.*, dark coloured urine, and a most offensive or putrid smell from the animal before death, with rapid decomposition afterwards. It is looked upon as being incurable, but sometimes chillies are given powdered and mixed with *gur* or the animal is tied up in a warm place, and almonds, fresh blood of a goat, honey, *pipal* (ficus religiosa), black pepper, and asafœtida is given.

Jakarjana or rheumatism.—*Ajwain* (liqusticum ajowan) mixed with the urine of another camel is given for three or four days when the animal is said to generally recover

Hubbi or strangles.—The swelling and abscess is said sometimes to extend down the neck to the sternum, the part is fired and *mako* (solanum nigrum) and *amaltas* (cathartocarpu fistula), the Indian laburnum seeds, boiled in water is tied on the wound as poultice.

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Camels.

Kipali, catarrh or influenza.—The symptoms are drooping head, stops feeding and ruminating, and mucus flows from the nose ; a hard swelling is found inside both ears. The same drench is given as to the horse, and the ears fired in a circle round the roots.

Sheep.

Sheep have greatly increased in numbers, especially in the Thal, where they are displacing camels and even horned cattle, and it would be difficult to imagine a country better adapted for sheep raising than those wide dry plains, with plenty of ranging ground over them.

The genuine Shahpur sheep stands about 30 inches high and 26 to 27 in girth, but as compared with English sheep, Leicester or Southdowns, is a leggy animal. The chief distinguishing points are a curved (*i.e.*, Roman) nose, small muzzle, broad forehead, very long drooping ears, sometimes 13 or 14 inches in length, eyes set back inside of face, tail short and small. The wool fine and of a fairly long staple, the ears, face and legs generally black, and often the wool is partly colored. Males are sold for Rs. 6 or less : females for Rs. 7 or less. *Dumbas* or fat-tailed sheep of medium size are found in the Salt Range ; in some of them the size of the tail amounts to a deformity. Mr. Nunn saw one the tail of which measured over two feet across at the broadest part, and was so heavy that when lying down, the animal could not rise without assistance, and was told that from the tail of a similar sheep that had been killed, over 80 pounds of fat had been taken. The *dumba* if crossed with the Thal sheep loses all its characteristics in about the third generation. The male lambs are castrated at 6 months old, and are sold as yearling wethers to dealers who come from all parts of country to buy them Many are taken to Rawalpindi and other cantonments for commissariat purposes. Sheep are shorn twice a year at the beginning and end of the hot weather and give about three-eighths of a seer of wool each time in the Bár, and double that quantity in the Thal. The white wool of the Thal is famous for its fine quality and sells uncleaned at about Rs. 20 per maund, and cleaned at Rs. 30. Ordinarily 2 ram's fleeces (*pothi*), or 3 ewe's fleeces are sold for a rupee. The head-quarters of the trade in Thal wool is Nurpur whence a large quantity is annually exported towards Multán and Karáchi, and where a good quality of blanket (*loi*) is made. The wool of the Bár is largely consumed at Bhera where it is made into felt (*namda*). A good sheep fetches Rs. 8, and a good ram Rs. 17. Sheep often die in large numbers of epidemic disease, and are subject to that form of splenic apoplexy or anthrax (*pharikki*) which is common

ly known as "braxy" in Scotland. A sheep's skin fetches anything up to 1 rupee.

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*Goats.**—The Salt Range breed are very large goats with long hair and long spiral horns, very like small Márkhor in appearance. These give up to about 4 seers of milk. Females sell at about Rs. 7, males at about Rs. 5, but occasionally much higher prices are obtained.

The Thal breed are small goats with small horns generally black or piebald. Females fetch up to Rs. 6, males up to Rs. 5.

The Burberry Goats are large and leggy, generally red or shewbald in colour, with short hair and small ears and horns. They are great milkers, sometimes giving up to 5 or 6 seers of milk. The females sometimes sell for as much as Rs. 40. They are numerous in the canal area, and were brought there originally from Siálkot.

There is a breed of Burberry type in the Sún *Iláqua* (probably descended from imported Burberrys) which gives up to about 4½ seers of milk. The females fetch up to Rs. 10, males up to Rs. 6.

Goat skins fetch anything up to Rs. 1-8-0 a piece.

Goats are shorn once a year at the end of the cold season, and give 3-8ths of a seer of hair (*jatt*), which sells at 2 or 3 seers per rupee, giving 2 or 3 annas per goat per annum. It is made into ropes and coarse cloth used for nose bags for horses and for camel saddles.

Veterinary administration.

The Civil Veterinary Department in Shahpur is included in the North Punjab Circle, the head-quarters of which are at Ráwalpindi.

It consists of one Veterinary Inspector with head-quarters at Shahpur, who divides his time between this district and Miánwáli and five Veterinary Assistants, one being an itinerating man who works in the whole district, and one man in charge of each of the Veterinary hospitals at Shahpur, Bhera, Sáhíwál and Khusháb.

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*Mr. Wilson distinguished the following breeds :—

I. *Bhali*, a very large goat, standing 36 inches high, with long hair and long narrow ears, one measured being 13 inches.

II. *Hajirian*, which are much the same except that the ears are broader and the teats are very small; this sort of goat is the best milker.

III. *Boji*, a small goat with very small ears.

IV. *Barbali*, which is very rare. This is not an indigenous breed, but from time to time has been brought up from Sindh by boatmen on their return from voyages to Sukkur and down the Indus; it is a very small species, not more than 18 to 20 inches high, with small ears and horns, very slight-limbed, and black and tan in color.

V. *Munja* or *bulna*, a small black and tan colored goat with short ears and horns. Goats of this breed have a most extraordinary cutaneous appendage from each side of the neck, growing out of the jugular channel, about the size of one's finger, and from 5 to 6 inches long.

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Agriculture and Irrigation

Veterinary administration.

The work of this department consists of the management and supervision of Veterinary hospitals, arrangement for the checking and prevention of contagious disease (inoculation), supervision of cattle-breeding – bulls are provided by the District Board, and the Civil Veterinary Department give practical advice and assistance in castrating surplus and inferior males),—assistance in the general management of cattle fairs, the general supervision of Government animals (except horse and donkey stallions which are at present under the Army Remount Department), the collection and tabulation of statistics regarding contagious disease and mortality, and any work of a professional nature which they may be called on to do by their own department or the district authorities.

Horses and ponies.

The district has always been one of the best in the Punjab for the breeding of horses and ponies; the local breed known as *Anmol* or ' priceless' is one of which any district might be proud. Even at last settlement there were over 600 branded mares, served by about a dozen Government stallions, and producing about 125 colts and fillies annually. The wealthier Tiwána Maliks, the Núns, and the Mekans all maintained good studs, and most of the well-to-do owners had one or two good mares. In the parts of the district where these mares were to be found at settlement, the position is much as it was; the District Board maintains eleven stallions and eight donkey stallions, and 671 branded mares produced 189 colts and fillies to them. But these figures are entirely overshadowed by the results of the horse-breeding scheme which is one of the principal features of the Lower Jhelum Colony. The general outlines of the scheme and the results up to date are as follows:—

The majority of the colonists, both Civil and Military, are obliged by the conditions of their grants to keep up a mare for every unit of grant (2 squares in the case of peasant grantees, and 1½ squares in the case of yeomen and stud farm grantees): the mare must be regularly covered by a Government stallion, and Government holds a lien on the progeny till 18 months of age. In the event of the mare dying, the owner must replace her within 3 months. The work of branding and registering colony mares was made over by the Civil Veterinary to the Army Remount Department in September 1902, and 5 stallion stables were complete and occupied in May 1903; close co-operation between the Irrigation, Colonization and Remount officers had the excellent result that Government was able to provide stallions as soon as the earliest colonists had procured their mares and settled on their lands. Since then there has been parallel ex-

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Horses and ponies.

pansion of irrigation, colonization and breeding, and there are now 14 stallion stands so distributed that no horse-breeding colonist has to travel more than 5 or 6 miles to get his mare covered. The sanctioned strength of stallions in the circle is 100, and the actual number standing in 1915 is shown in the margin. In the first year (1903-04) 1,488 mares were covered and 563 foals produced. In 1913-14, 3,499 mares were covered and 1,968 foals produced; it is worth remarking that in that year (the latest for which the figures are published) the percentage of foals to coverings (56·24 per cent.) was as good as that obtained by the King's premium stallions in England. The extent to which the Indian Army is benefited may be judged from the figures quoted; it is considered that a standard of at least 500 foals fit for Departmental purchase in the year should be worked up to, but the quality of the foals is said to be improving year by year. It has been now fully established that the horse-breeding conditions are working most satisfactorily; the only condition which gave any real trouble was that which required the colonist to replace a deceased mare within three months; the inevitable difficulties were met partly by the Remount Department consenting to relinquish its lien on fillies required for replacement purposes, and partly by the grant of Government loans for the purchase of replacements, and these two concessions are combined into one scheme by the Remount officers, in such a way that all mares will be eventually replaced by pedigree-animals bred in the Colony while the price of replacements is officially fixed so as to satisfy both buyer and seller. Thus in 1911-12, 509 mares were replaced, and 298 colonists received Rs. 50,000 in loans for this purpose. It can easily be understood that this system is extremely popular. It is recognized, both by Government and by the colonists, that the great success which has attended horse-breeding in the Jhelum Colony is mainly due to Major C. Templer, the first Remount Officer, and Mr. W. M. Hailey, the Colonization Officer who between them organized the earliest operations and surmounted

Thorough-bred English ...	27
Thorough-bred Australian ...	17
Arab ...	56
Ahmadnagar Stud Bred ...	6
Total	...106

Year.	Number of foals purchased	
	By Army Remount Department.	By Indian Cavalry Regiments.
1910-11 ...	369	117
1911-12 ..	402	112
1912-13 ...	374	122
1913-14 ...	377	79
1914-15 ...	438	86

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the initial difficulties ; to Major J. Bruce, who succeeded Major Templer, and ensured the maintenance of the scheme at a time when the colonists were inclined to think more of their privileges than of their responsibilities ; and to Major H. F. Gordon, who has during the past five years succeeded, by his great tact and personal popularity, in convincing the colonists that the scheme benefits them no less than Government.

Sargodha Remount Depôt.

Between 2 and 3 miles from the Civil Station is situated the Remount Depôt, lying to the left of the Sargodha-Shahpur Road on the right bank of the Northern Branch of the Lower Jhelum Canal. It comprises an area of 10,000 acres.

The object of the Remount Depôt, which was officially opened in April 1907, is to receive young country-bred horses and mules bred in the various horses and mule breeding districts of the Punjab, United Provinces and Baluchistan, and to run them, until old enough to be issued, to the Army in India. Horses are issued to British Cavalry and Non-Silladar Cavalry Regiments ; mules are issued to Mountain Batteries, Sapper and Miner units, Infantry Regiments for carrying Machine Guns, Pioneer Regiments for entrenching tools and to the supply and Transport Corps as baggage and cart mules.

The complement of animals during normal times is 1,500 horses and 1,400 mules, which has been considerably exceeded during the present war.

Extensive farming operations are carried on and the Depôt is self-supporting with regard to all fodder except *bhoosa*. Among other crops, sufficient oats have been produced for the last five years to make the Depôt independent of the outside market with regard to this grain.

The staff consists of a Superintendent and his Assistant drawn from British Officers of the Indian Cavalry ; a Veterinary Officer of the Army Veterinary Corps and a Medical Officer of the Indian Subordinate Medical Department. There is a subordinate European staff of five British Warrant and Non-Commissioned Officers selected from the mounted branches, a subordinate veterinary establishment, an office establishment and a menial establishment of about 1,000 souls consisting of artificers, farm hands, and syces. Major E. Hagger has been Superintendent from the opening of the Depôt up till now.

Horse Fairs.

Before 1904 one horse show used to be held at Shahpur for the whole district. It was managed by the District Board under the control of the Civil Veterinary Department. After

that year owing to the development of horse-breeding in the Lower Jhelum Canal Colony a separate fair was held at Sargodha.

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Both these fairs are under the control of the Army Remount Department and up to 1909 were held separately. In 1909 the number of animals attending the fair at Shahpur was so small that in 1910, on the advice of the Superintendent, Army Remount Department, it was amalgamated with the Sargodha Fair. In 1911, on the representation of the horsebreeders of the old part of the district, a separate fair was again held at Shahpur, but it was abandoned in 1914 only to be reintroduced in 1916.

At the Shahpur fair, only horses from the old portion of the district compete, and at Sargodha, only horses from the Colony area. The latter fair from the horse-breeding and purchasing point of view is the best and most important fair in India.

Prizes are given from imperial funds at both the fairs, while at Shahpur separate prizes are also given by the District Board for the produce of its stallions.

The judging is done by the special Judging Committee, nominated by the Quartermaster-General in India, with the Deputy Commissioner of the district as President. The general expenses of both the fairs are met from District Board funds, to which the income is also credited.

Statements A and B attached show the number of animals attending each fair, the number sold and the value of the prizes awarded.

At these fairs, cattle are also shown and prizes are given by the District Board to encourage cattle-breeding.

Sports of various kinds are also held at both fairs to attract, people and popularize the fairs. The following events are generally held.

Tent-pegging by individuals, and by sections ; Pirkaudis Saunchi Races ; Tug of war ; Jugglers.

The winners are given prizes by the District Board.

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Agriculture and Irrigation.

Horse Fairs.

STATEMENT

Statement showing the Horse Fairs

No.	Name of the year.	TOTAL NUMBER OF ANIMALS PRESENT.				TOTAL NUMBER COMPETED FOR PRIZES.				NUMBER OF REMOUNTS PURCHASED.				
		Horses.	Mules.	Donkeys.	Total.	Horses.	Mules.	Donkeys.	Total.	For Remount Department.	For Native Cavalry.	For Police.	Transport ponies.	Total.
1	1904-05 ...	2,365	...	...	2,365	2,356	...	...	2,356	...	6	...	...	6
2	1905-06 ...	1,131	6	...	1,137	465	...	...	465	32	32	...	...	64
3	1906-07 ...	1,128	7	...	1,135	805	...	...	805	...	78	...	...	78
4	1907-08 ...	1,590	5	...	1,595	771	...	...	771	...	66	...	4	70
5	1908-09 ...		Not	held.										
6	1909-10 ...	1,001	...	...	1,001	461	...	...	461	...	132	...	...	132
7	1910-11 ...	854	...	...	854	827	...	...	827	Not	availa ble			
8	1911-12 ...	1,357	...	...	1,357	724	...	...	724	...	62	...	...	62
9	1912-13 ...	1,891	...	...	1,891	1,093	...	...	1,093	...	67	...	...	67
10	1913-14 ...	2,453	...	...	2,453	1,294	...	...	1,294	...	...	...	...	...
11	1914-15 ...	1,786	...	...	1,786	777	...	...	777	...	59	...	...	59
12	1915-16 ...	2,457	...	...	2,457	1,114	...	...	1,114	...	57	...	...	57

A

at Sargodha commencing from 1904-05.

Prices paid for remounts.			Mules purchased.						Prices paid for mules.			Prizes.					Remarks.
Highest price.	Lowest price.	Average price.	Ordinance.	Transport.	By Native States.	By Native Canalry.	By dealers, etc.	Total.	Highest.	Lowest.	Average.	Sanctioned from Imperial Government.	Sanctioned from Provincial, etc.	Total.	Amount actually awarded.	Number of medals given away.	
Rs.	Rs.	Rs.							Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
280	100	221	...	...	...	...	...	...	...	..	...	500	...	500	500	...	
700	110	143	...	1	...	...	1	2	...	...	...	1,500	...	1,500	1,500	1	
300	75	170	...	..	..	...	1	1	33	...	33	3,000	...	3,000	3,000	...	
375	95	173	...	...	...	1	5	6	150	65	99	3,000	...	3,000	3,000	...	
	Not	held															
305	80	155	...	..	..	...	..	...	...	...	...	3,0 0	...	3,000	2,950	2	
		Not	avai	labl	e												
300	105	156	..	...	5	...	7	12	...	...	..	3,300	...	3,300	3,300	2	Animals sold .. 450.
205	75	140	...	4	...	..	28	32	187	44	98	3,3?0	...	3,300	3,300	2	,, .. 606.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	
240	50	146	...	...	...	...	...	...	...	...	...	3,300	...	3,300	3,265	3	,, ,, 580.
260	70	151	...	...	..	...	...	...	...	...	...	4,000	...	4,000	3,980	2	,, ,, 718.

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Agriculture and Irrigation.

Horse Fairs.

STATEMENT

Statement showing the results of the Horse Fairs

No.	Name of the year.	Total number of animals present.				Total number competed for prizes.				Numbers of remounts purchased			
		Horses.	Mules.	Donkeys.	Total.	Horses.	Mules.	Donkeys.	Total.	For Remount Department.	For Native Cavalry.	For Police.	Total.
1	1902-03 ...	1,207	...	...	1,207	407	...	...	407	5	26	...	31
2	1903-04 ...	1,230	...	...	1,230	543	...	...	543				Not
3	1904-05 ...	938	...	...	938	627	...	...	627	17	14	...	31
4	1905-06 ...	1,095	...	...	1,095	436	...	...	436				Not
5	1906-07 ...	1,067	128	21	1,216	343	98	8	449	5	37	...	[illegible]
6	1907-08 ...	909	93	14	1,016	286	82	32	400	5	37	...	42
7	1908-09 ...	1,457	102	63	1,622	362	76	27	465	2	67	...	69
8	1909-10 ...	293	59	23	375	209	58 The	22 fair	289 was a	1 malgamat	ed ...	...	1
9	1910-11 ...	685	57	26	768	220	57 The	26 fair	303 was a	8 gain	14	...	22
10	1911-12 ...	708	84	79	871	185	60 Th	62 e fair	307 was a	... gain	11	...	11
11	1912-13 ...	823	76	54	953	190	34 Th	44 e fair	268 was ag	1 ain	...	...	1
12	1913-14 .	355	22	35	412	147	26 The	31 fair	204 was a	... gain	...	...	—
13	1914-15 ...	196	50	15	261	119	35	6	160	1	...	...	1
14	1915-16 ...	854	83	32	969	178	53 Separat	32 e fair	263	...	15	...	15

B.

at Shahpur commencing from the year 1902-03.

PRICES PAID FOR REMOUNTS.			MULES PURCHASED.					PRICES PAID FOR MULES.			PRIZES					REMARKS.
Highest price.	Lowest price.	Average price.	Ordnance.	Transport.	By Native States.	By dealers, etc.	Total.	Highest.	Lowest.	Average.	Sanctioned by Imperial Government.	Sanctioned from Provincial, District Board, etc.	Total.	Amount actually awarded.	Number of medals given away.	
Rs.	Rs.	Rs.							Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
425	200	310	...		..	1	1	60	60	60	1,400	243	1,643	1,469	1	Total number of animals sold 138 for Rs. 20,470
avai	labl	e.														
310	150	210	6	...	...	2	8	325	60	39	1,400	243	1,643	1,639	1	Total number of animals sold 196 for Rs. 19,364
avai	labl	e														
312	90	188	3	1	..	44	48	350	33	133	1,400	243	1,643	1,585	...	Total number of animals sold 258 for Rs. 28,523.
340	?5	184	...	...	..	12	12	170	30	108	1,400	243	1,643	1,549	...	Total number of animals sold 193 for Rs. 23,164.
250	250	250	3	...	...	13	16	350	30	148	1,400	243	1,643	1,715	...	Total number of animals sold 359 for Rs. 38,950.
305 with	... Sar	305 god	... ha a	... nd	3 held	18 at	21 tha	219 plac	44 e.	112	1,400	243	1,643	1,240	2	Total number of animals sold 273 for Rs. 23,400.
310 sepa	66 rate	172 d fr	... om	1 Sarg	... odh	7 a an	8 d he	145 ld a	63 t Sh	92 ahpur.	1,000	243	1,2 3	1,173	2	Total number of animals sold 121 for Rs. 9,547.
240 sepa	98 rate	134 d fr	... om	... Sarg	... odh	4 a an	4 d he	118 ld at	40 Sha	89 hpur.	1,000	243	1,243	889	1	Total number of animals sold 168 for Rs. 12,096.
300 sepa	... rate	300 d fr	... om	... Sarg	... odh	14 a an	14 d he	128 ld at	25 Sha	74 hpur.	800	323	1,123	677	2	Total number of animals sold 119 for Rs. 9,520.
... com	... bine	... d an	... d he	ld a	t S	... arg	odha	...	...	...	...	...	...	...	...	
...	...	...	...	13		16	...	192	25	98	700	243	943	715	1	*Vide* Sargodha.
220 held	75 at	159 Shah	... pur	...		10	...	162	15	94	500	243	743	580	1	86 animals.

CHAP. II-A

Agriculture and Irrigation.

Irrigation.

The prosperity of the district has always been largely dependent on artificial irrigation.

The area flooded directly by the rivers is not capable of any further marked increase, and has remained fairly constant at about 62,000 acres for the last five years.

The area cultivated by means of the local rainfall, aided in part by mountain torrents or the drainage from neighbouring higher ground, has increased in the last three years by 25,000 acres : out of a five year average *báráni* area of 294,000 acres, less than 75 per cent. was sown and less than 60 per cent. matured.

From very early times the water-supply derived from rain and river-floods has been supplemented by wells, in the river-valleys. The history of these wells is given below. Their importance has now been dwarfed by the development of canal irrigation. The canal irrigated area, which was *nil* at regular settlement, had risen to 87,654 acres in 1893 ; and is now 785,805* acres. Canal irrigation is of three distinct kinds :—(1) *inundation* (104,823 acres) which depends on the seasonal rise and fall of the rivers, and gives water for the sowing and maturing of *kharíf* crops, and the sowing of the *rabi,* with a very occasional watering for the ripening crop. Experience has shewn that if plenty of water is given in August or September, the *rabi* crop on the inundation canals will come to maturity with hardly any rainfall ; but most of the land irrigated by these canals would go out of cultivation if it failed to get first watering from them owing to the alkali in the soil : (2) *perennial* (673,789 acres) which is entirely dependent on the Lower Jhelum Canal for the sowing and maturing of all crops : here failure of supply almost always means failure of crop : (3) *six-monthly* (5,716 acres) which is confined to two distributaries of the perennial canal in the Jhelum Valley near Sáhíwál : here the system is very similar to the inundation system, but owing to the stiff clayey nature of the soil commanded, it is necessary to keep the distributaries in flow for at least 8 months in order to ensure the ripening of the crops.

Inundation Canals.

There was practically no canal irrigation in the district until in 1860 Mr. Macnabb, Deputy Commissioner, cleared out at his own expense an old river channel which developed into the canal called after him the Macnabbwáh, and induced Malik

*This figure includes 1,477 acres of "*ábi*" land on perennial streams, but does not include 23,488 acres of *cháhi-nahri*, which depend even more on the canals than on the wells.

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Agriculture and Irrigation.
Inundation Canals.

Sáhib Khán, Tiwána, to excavate a large canal to irrigate a grant of waste land given him at Kálra. The profits secured were so great that numerous other canals were soon after constructed, some by the State and others by private persons, and although several of these have since been abandoned or absorbed in others there are now in existence 4 State and 12 private inundation canals, more or less in working order. The State canals are (1) the Station Canal and (2) the Sáhíwál Canal, both in the Shahpur Tahsíl, the latter of which has now absorbed the Macnabbwáh and the old Sáhíwál Canal, (3) the Rániwáh in the Bhera Tahsíl, and (4) the Corbynwáh in the Khusháb Tahsíl. The Station Canal (which really consists of two separate canals, known as the Eastern and Western Station Canals) and the Sáhíwál Canal are the property of the Imperial Government. The Rániwáh and Corbynwáh are Provincial.

Imperial Inundation Canals.

In 1870 the Imperial Government purchased the Station Canal, the Macnabbwáh, and the old Sáhíwál Canal from Local Funds for Rs. 20,610. Between 1877 and 1880 the capital outlay was raised to Rs. 40,739; between 1891 and 1893 this was again raised to Rs. 1,36,867, and in 1893 these canals had brought in a clear profit of Rs. 53,501 over and above all charges for capital outlay, and working expenses, and were paying 28 per cent. on the capital outlay.

In 1914-15 the capital account stood at Rs. 2,15,914; for that year the gross receipts were Rs. 1,16,689, working expenses Rs. 50,207, and nett revenue Rs. 66,482, giving a return of over 30 per cent. The average return for the 27 preceding years was 21 per cent and the net revenue to date was Rs. 10,63,191, which gives a clear profit of Rs. 8,47,277. Even if interest charges also are allowed for the nett profit is Rs. 6,64,913.

The work done by these canals, and the cost of the water to the cultivators, can be judged from the following figures:—

	AVERAGE FOR TRIENNIUM.			Year 1914-15.
	1905-07.	1908-10.	1911-13.	
Area irrigated, acres	32,154	38,180	36,538	43,697
Area matured and assessed, acres	22,182	33,168	33,901	39,375
Total assessments, direct and indirect, Rs.	66,662	98,555	97,259	1,12,857
Occupiers' rates, Rs.	54,059	81,592	81,207	94,295

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Agriculture and Irrigation.

Provincial Inundation Canals.

The value of the crops raised in 1914-15 is estimated at Rs. 11,90,428.

The Ráníwáh was originally excavated in 1870 by the Deputy Commissioner with the aid of *takávi* advances to the amount of Rs. 19,500, and the income of the canal in the first year of its running was Rs. 5,642 and in the second Rs. 19,070. The *takávi* advances were paid off and in the third year after the commencement of the canal the capital cost was extinguished and Government was in possession of a canal which had cost it nothing, capable of irrigating 6,000 acres and having a net revenue of Rs. 7,000 per annum. Since then the canal has been considerably extended, out of revenue. In 1893, the net profit had amounted to Rs 3,80,000. For purposes of accounts this canal is now amalgamated with the Corbynwáh, so it is impossible to say exactly what the profits to date have been on it alone. For the last 10 years the nett income has averaged Rs. 19,390 as against Rs. 25,129 for the 13 years ending 1893, so it would seem that the increased expenditure has hardly been justified by results. The gross income varied between Rs. 33,867 in 1911-12 and Rs. 1,13,022 in 1914-15.

The Corbynwáh Canal in the Khusháb Tahsil was originally made in 1879 by Captain Corbyn, Deputy Commissioner, at the cost of the District Board and Khusháb Municipal Committee but finally in 1891 was acquired by the Provincial Government, together with Malik Sher Muhammad Khán's Canal alongside which it ran. The capital cost of the combined canal to Government is estimated at Rs. 38,671, including Rs. 13,671 spent on improvements after the acquisition. During the five years ending 1892 it irrigated on the average 2,428 acres, had an income of Rs. 1,959 and an expenditure of Rs. 1,019, and brought in a net profit of Rs. 940 per annum. During the 10 years ending 1914-15 irrigation averaged about 7,000 acres (most of it only grass) : the average income was Rs. 4,808, expenditure Rs. 1,831 and nett revenue Rs. 2,977. It is a poor canal in every way, but much better than nothing for the villages it commands.

No capital account is now kept for these Provincial Canals but in 1914-15 the balance of net revenue on the two combined was Rs. 2,61,598, the total receipts to date being Rs. 10,05,675 and the total charges Rs. 7,44,077. For the year 1914-15, the gross receipts were Rs. 58,150, the working expenses Rs. 42,083 and the nett revenue Rs. 16,067, which was slightly less than the average of the preceding 15 years.

The working of the Provincial Canals in recent years has been as follows:— CHAP. II-A. Agriculture and Irrigation. Provincial Inundation Canals

	AVERAGE OF TRIENNIUM.			Year 1914-15
	1905-07	1908-10	1911-13	
Area irrigated, acres ...	24,231	26,601	27,784	30,361
Area matured and assessed, acres.	19,920	24,719	25,861	28,817
Total assessments, direct and indirect, Rs.	40,534	49,946	54,115	59,125
Occupiers' rates, Rs. ...	32,749	40,871	44,188	47,977

The value of the crops raised in 1914-15 is estimated at Rs. 6,22,147.

The private canals now in existence are as follows:— Private Canals.

No.	River.	Name of Canal.	Approximate area irrigated.
			Acres.
1	Jhelum ...	Píránwála	2,400
2	Ditto ...	Núnánwála	5,500
3	Ditto ...	Sultán Mahmúdwála	6,500
4	Ditto	Chahárami	700
5	Ditto ...	Sáhib Khánwála	13,500
6	Ditto ...	Mekanánwála	4,500
7	Ditto ...	Chillwála or Jahán Khán Wála ...	7,500
8	Ditto ...	Sarfráz Khánwála	4,500
9	Ditto ...	Jhammatánwála	200
10	Ditto ...	Nathúwála	600
11	Ditto ...	Kandánwála or Mughlánwála ...	100
12	Ditto ...	Tútánwála or Megha	100

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Private Canals.

This area is approximately the average irrigated in a normal series of years, the maximum irrigation being considerably more. Besides the Malik Sher Muhammad Canal bought up and absorbed in the Corbynwáh, as already mentioned, the Jahán Khánwála in Bhera was purchased by the Provincial Government some years ago for Rs. 5,000 and absorbed in the Ráníwáh, and the Mahotewála was purchased by the Imperial Government for Rs. 1,200, and absorbed in the Sáhíwál Canal. Two other Jhelum Canals, the Amír Chandwála and the Nabbewála, which at one time irrigated about 100 acres apiece, have not been in working order for many years. Three canals on the Chenab, irrigating about 1,500 acres between them, have also ceased to work. A detailed history of these canals will be found in Mr. Wilson's assessment reports on Bhera and Shahpur Tahsils, and they have been exhaustively discussed from all points of view in connection with the proposal to supersede all inundation canals by the Shahpur Branch, which is described below.

Water-rates on Inundation Canals.

The schedule of occupiers' rates in force on the Imperial and Provincial Inundation Canals is as follows :—

—	CORBYNWAH.		ALL OTHER CANALS.	
	Flow.	Lift.	Flow	Lift.
	Rs. A. P.	Rs A. P.	Rs. A. P.	Rs. A. P.
Rice ...	1 8 0	0 12 0	3 8 0	1 4 0
Other crops ...	1 8 0	0 12 0	2 8 0	1 4 0
Grass lands ..	0 2 0	0 1 0	1 4 0	1 4 0

On private canals from the Jhelum the canal-owner generally takes as the price of the water one-fourth of the gross produce of the land irrigated, both grain and straw, after making the usual deduction for village menials. The accounts produced by various owners show that the average value of this income is about Rs. 4-8-0 per acre matured, or very nearly double the flow rate of Rs. 2-8-0 per acre on the State Canals For lift irrigation the owners of private canals generally charge from Rs. 16 to Rs. 22 on each *jhalár* or Persian wheel erected on the bank of the canal and on *cháhi-nahri* lands they generally take 1/5th or 1/6th share. In some cases the owners of the land through which

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Agriculture and Irrigation.

a private canal passes are entitled to the irrigation of a certain area free in return for their having given the land over which the canal passes—a source of frequent dispute and litigation.

Water rates on Inundation Canals.

Besides the water rate, a water-advantage rate is levied on all land irrigated by inundation canals, whether State or Private, at the rate of one rupee per acre of crops matured; and on all land irrigated by private canals an additional royalty rate of 12 annas per acre is charged to the owner of the canal, by way of asserting the right of the State to the water in the rivers.

Perennial Canals.

The main features of the Lower Jhelum Canal system have already been described in Chapter I. The total area commanded in this district is 966,407 acres, and of this 501,542 acres are supposed to be irrigated annually. As a matter of fact, in 1914-15, 680,696 acres, belonging to 587 estates, were actually irrigated (194,358 acres in the *kharif*, and 486,338 acres in the *rabi*) and 666,161 acres were actually assessed. Out of the total area commanded 479,000 acres are still the property of Government; 42,727 acres have not yet been allotted; of the 436,273 acres allotted to colonists or earmarked for public purposes, 392,987 acres are cultivated and 398,914 acres were irrigated in 1914-15.

Irrigation first began in 1901, but only in a very haphazard way and no occupiers' rates were levied in that year. The various assessment circles obtained a regular supply in the harvests noted against each, but a series of misfortunes retarded development, and it is only since recently that the canal can be considered to have been working at full pressure. The figures of area in this district for the past five years are as follows :—

Shahpur Ara	*Kharif* 1902
Bhera Bár	*Rabi* 1903
Sargodha Bár Utla ...	*Rabi* 1903 *Kharif* 1905
Sargodha Bár Hethla ...	*Rabi* 1904 *Kharif* 1905
Bhera Chenáb	*Kharif* 1906

—	1910-11.	1911-12.	1912-13.	1913-14.	1914-15
	Acres.	Acres.	Acres.	Acres.	Acres.
Area irrigated	628,374	666,910	665,514	680,550	680,696
Area assessed	561,253	587,091	656,846	669,235	666,161

Financial results of the Lower Jhelum Canal.

Up to the end of 1914-15 the capital account of the Lower Jhelum Canal as a whole stood at Rs 1,55,62,968; the net revenue to date, after deducting interest charges and all other working

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expenses, was Rs. 1,11,13,358. The return on capital for the year, after deducting interest charges, was 18·38 per cent.; the value of the crops raised was estimated at Rs. 2,69,62,302; occupiers' rates amounted to Rs. 27,51,571, with an incidence of 3·44 per acre assessed. Whether this pitch of prosperity will be maintained depends largely on the effects of the Tripal Canal Project.

Grave fears are now entertained lest the alteration in the winter-supply necessitated by the opening of the Upper Jhelum Canal may seriously reduce the matured areas. The Irrigation Officers hold that the cultivators will have no difficulty in adjusting themselves to an intermittent supply in the cold weather, either by putting a larger proportion of the land under *kharíf* crops, or by adopting methods of cultivation better calculated to conserve moisture. It remains to be seen whether the colonists have the requisite adaptability.

Six-monthly irrigation.

The Gondal and Sáhíwál distributaries do not run for more than 8 or 9 months in the year, the reason being that they command villages in which the spring level is so near the surface as to threaten water-logging. The area commanded by these distributaries is only 5,716 acres, and only 3,125 acres are matured from them on an average of years. These areas are included in those given above for the Lower Jhelum Canal.

The Shahpur Branch.

When first the Triple Canal Project was sanctioned, it was apprehended that the working of the inundation canals might be seriously impaired, and it was suggested that it would be wise to anticipate trouble by constructing a *kharíf* distributary of the Lower Jhelum Canal, to supersede them. All sorts of opinions were expressed by various Canal and Revenue Officers, but eventually, in 1906, the main channel was actually dug from Chak Raib, near Malakwál, on the main line to Saidal, near Jhawarián from which point the Branch was to coincide with the Western Station Canal, tailing into the Sáhíwál Canal just north of Shahpur. It was then found to be impossible to arrange satisfactory terms with the owners of the private canals: they were utterly unwilling to link up their canals with the Branch, except on terms which made the whole scheme financially impossible. After years of correspondence and negotiation, they refused in April 1916, to accept an offer of irrigation for all their own lands at a rate equivalent to their usual expenditure on upkeep, maintenance, and royalty, and the right to collect a quarter share in kind on all lands on which they had previously done so, on payment of the same rate. It is understood that the Branch will now be definitely abandoned, and the eight lakhs of rupees already spent on it may be considered almost a dead loss.

Canal administration.

The Lower Jhelum Canal Circle is in charge of a Superintending Engineer, whose head-quarters were in 1916 moved from Jhelum to Sargodha. Under him are three Executive Engineers each in charge of a division. The First Division has its head-quarters at Rasúl and includes the Main Line, and 4 of its major distributaries with a total distributary mileage, major and minor, of 34 miles: it also includes the two Provincial Canals. The Second Division has its head-quarters at Sargodha and includes 1 distributary of the Main Line, 21 distributaries of the Northern Branch, 32 distributaries of the Southern Branch and Khadir feeder, and 16 distributaries of the Southern feeder; the total mileage is 394 miles; it also includes the Imperial Inundation Canals. The Third Division also has its head-quarters at Sargodha and includes 41 distributaries of the Northern Branch, 9 of the Southern Branch, and 17 of the Sulki Branch, with a total mileage of 502 miles. The *kharíf* distributaries are in this division.

Water rates on the Lower Jhelum Canal.

The occupiers' rates now in force on the Lower Jhelum Canal are in two schedules. Schedule B applies to (1) all villages in Bhera Tahsíl irrigated from the Khádir Feeder or Distributary; (2) all villages in Shahpur Tahsíl, except (*a*) Vegowál and (*b*) villages irrigated from the Sáhíwál feeder and *kharíf* distributaries; (3) the following *Chaks* in Sargodha Tahsíl: Nothern Branch— Nos. 89, 93, 94, 95, 103, 104, 105, 108, 110, 112, 115 to 174 inclusive; Southern Branch—Nos. 60, 61, 63, 131, 133, 134, 135, 137 to 141, and Chak Jodh. Schedule A applies to all other estates:—

Detail.	Schedule A.		Schedule B.	
	Flow.	Lift.	Flow.	Lift.
	Rs A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—Sugarcane, waternuts ...	10 0 0	5 0 0	7 8 0	3 12 0
II.—Rice	6 4 0	3 2 0	4 0 0	2 0 0
III.—Orchards, gardens, tobacco, indigo, vegetables, drugs, poppy, melons.	5 0 0	2 8 0	5 0 0	2 8 0
IV.—Cottons, fibres, dyes other than indigo, oilseeds, maize, all *rabi* crops except gram and *masur*.	3 12 0	1 14 0	3 4 0 (*a*) 3 0 0 (*b*) 2 8 0	1 10 0 (*a*) 1 8 0 (*b*) 1 4 0
V.—All other *kharíf* crops, gram, *masur*, and all crops grown for fodder.	2 8 0	1 4 0	2 0 0	1 0 0

(*a*) Wheat only.
(*b*) Cotton and oilseed only.

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Agriculture and Irrigation.
Water rates on the Lower Jhelum Canal.

Detail.	Schedule A.		Schedule B.	
	Flow.	Lift.	Flow.	Lift.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
VI.—Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. Crops grown on the moisture of a previous crop.	1 4 0	0 10 0	1 4 0	0 10 0
VII.—Single watering before ploughing for *rabi*, followed by a *rabi* crop.	2 8 0	1 4 0	2 8 0	1 4 0
VIII.—Grass and colony plantations—				
(*i*) any number of *kharíf* watering;	1 4 0	0 10 0	1 4 0	0 10 0
(*ii*) one *rabi* watering;	1 4 0	0 10 0	1 4 0	0 10 0
(*iii*) more than one *rabi* watering.	2 8 0	1 4 0	2 8 0	1 4 0

Wells.

The number of wells in use, which had increased from 4,646 at regular settlement to 6,865 in 1893, is now 6,700: that is to say, there has been no great decrease in the number of cylinders since settlement. But the average *cháhi* area per well is now only 20½ acres, instead of 34, and the area of *cháhi* crops 19 acres, instead of 25. It has already been shown that the *cháhi* area has dropped from 236,524 acres to 137,36[illegible]. Moreover out of this total, 23,48[illegible] acres are *cháhi-nahri*, and would probably go out of cultivation at once, if they failed to get their first waterings from the canals, owing to the water being brackish. It has been shewn in Chapter I, Section A, how the canal has supplanted the wells in the Chenab Circle and the Ara. It is only in the Jhelum valley and the Sún basin that the wells are really important now.

Facility of irrigation from wells depends (1) on the quality of the water, (2) on its depth below the surface, (3) on the continuity of the supply. In the river valleys and those parts of the Bár uplands which adjoin them the subsurface water is almost everywhere sweet; there is, however, a noteworthy exception in a belt of land running along the drainages known as Rániwáh and Didhár, where the subsoil water is impregnated with salt to such an extent as to injure the crops in dry years; there is some reason to believe that in this tract the effect of the spread of canal irrigation across these drainages has been to increase the saltness of the well water, and the state of the crops

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irrigated from wells in that area should be watched. In the Bár uplands far from the rivers the water in the wells is often brackish and unsuitable for irrigation. In the plains portion of the Khusháb Tahsíl, except in the narrow strip immediately along the river, the subsoil water is so impregnated with salt as to be quite useless for purposes of irrigation and in many places undrinkable, so that irrigation from wells in that large tract is almost unknown. In the Salt Range the subsoil water in the basins of the valleys is generally sweet, even close to the margin of the Salt Lake of Uchháli. As for the depth to water, that naturally increases as one goes away from the channels of the rivers, even in greater proportion than the rise of the land surface above sea-level. In the river valleys the depth to water varies from about 15 feet near the river to about 30 feet near the edge of the Bár upland. The introduction of canal irrigation has had a marked effect in raising the water-level in the Jhelum Circle, where in many places instead of 200 pots on the Persian-wheel only 150 or less are now required ; this effect has been greatly enhanced by the record flood of July 1893, since which the subsoil level at the old head-quarters station has risen to within 6 feet of the surface and the foundations of some of the buildings threaten to subside. In the Bár uplands the depth to water varies from 40 to 55 feet. In the Thal the depth to water is 55 feet or more.

The continuity of the supply of water depends on the nature of the substrata ; in many parts of the district there is a sub-stratum of water-bearing sand through which water percolates regularly and rapidly into the well. This is called the *sach*, and the success of a well depends on whether it has been sunk far enough to reach this stratum. If the *sach* has not been reached the water is soon exhausted and the well cannot be constantly worked, so that the area it irrigates is small. In the Chenab valley as a rule the *sach* is better the farther one goes from the river, and the wells near the river are more easily exhausted and irrigate a smaller area than those towards the Bár.

Almost everywhere in the district the wells are made of burnt brick set, not in mortar, but in mud, and so good is the subsoil that such wells last for many years. In the Bár such wells practically last for ever, and many old wells made by the former inhabitants centuries ago were, before the canal came, dug out, repaired and set agoing. The site of such a well is sometimes discovered by noticing that goats will not sit over it. The cost of a well depends chiefly on the depth to water and varies from Rs. 150 near the river to Rs. 700 or more inland.

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An ordinary well in the river valleys may be taken as costing about Rs. 400 besides the peasant's labour. In the hills the cost varies from Rs. 400 to Rs. 1,000 according to the extent to which dressed stone is used.

When a site is to be chosen for a new well the land-owner calls together his friends and procures Re. 1-4-0 worth of *gur*. The experienced men among them consult as to what would be a good place, and select if possible ground raised slightly above the level of the land to be irrigated. They try to get a site towards the north, as it is found by experience that water flows better to the south than to the north! This idea is probably due to the general slope of the country being southwards. It is also found that water does more work when it flows nearly level with the ground than when it flows at a higher level. When the site has been chosen a blessing is prayed for (*dua kher akhi*), a potful of water is poured on the place, and a lump of the *gur* put on it. Then the most respectable men present take a spade (*kahi*), and all holding it together strike it into the ground to mark the spot chosen (*thappa márná*); the younger men then commence the excavation and the rest of the *gur* is distributed.

The universal means of irrigation from wells is the Persian wheel, the wood-work of which costs about Rs. 60 or 70. Sometimes this apparatus is set up on the bank of the canal or of a branch of the river, when it is called a *jhalár*. The rope-and-bucket apparatus is used only for the purpose of raising drinking-water from the deep wells in the Thal. The cost of irrigation depends chiefly on the depth to water. Nowadays there is little well-cultivation, except where the water-table is reasonably high, but twenty years ago, things were different.

"In the river valleys small bullocks are strong enough to work the wheel, but in the deep wells of the Bár, where the wheel carries 40 pots, only the strongest cattle can work the well, and male buffaloes are most generally used, often costing Rs. 60 or more each. Here a well in full work requires 18 buffaloes, giving three pairs to each third of a well, and the owners of a well, sometimes six or ten in number, generally get tenants to join them for the season, the produce of the irrigated land being divided between them in proportion to the number of buffaloes supplied by each."

Even now, in the Thal circle, the cattle have to be sturdy, and cannot draw enough water for more than 7 acres from one well.

In other circles also it is common for a number of land-owners to have shares in a well, but there it is usual for each sharer to work the well for a period corresponding to his share, irrigating his own land from the well for that period.

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The area ordinarily cultivated with the aid of irrigation from a well varies greatly in different parts of the district, and so does the area annually harvested per well. For the whole district the average area so attached to a well is 20½ acres, and the average area of irrigated crops actually harvested is 19 acres. The extremes are found in the Ara circle where 54 acres are on the average attached to a well, but only 24 acres give a crop in the year, and in the Salt Range where the area attached to a well averages only 2½ acres but produces nearly 4 acres of irrigated crops annually.

The nature of the crops grown on a well varies considerably in the different tracts, and has been described in the various assessment reports. For instance in the Jhelum Circle of Tahsíl Shahpur a well on the average gives annually 20 acres of crop, of which 3 acres are grown in the *kharíf* and 17 in the *rabi.* The *kharíf* crop includes 1 acre of fodder, 1 acre of *bájra,* ½ acre of cotton, and ½ acre of maize, *china,* sugarcane or rice, and the *rabi* crop 11 acres of wheat, ½ acre of barley, half an acre of other grains, 3½ acres of turnips, carrots and other vegetables, 1 acre of miscellaneous fodder and half an acre of melons or tobacco.

In the Bhera-Jhelum Circle, there are 19 acres of matured crop, 4½ in the *kharíf* and 14½ in the *rabi.* 2 acres will be under *bájra* with a little *jowár ;* ½ an acre will be devoted to fodder, and of the remaining 2 acres, about one-third will be under cotton, an equal area under maize, and the remainder will produce even more valuable crops—sugarcane, *mehdi,* and spices : in the *rabi* 10 acres will produce wheat, and another acre will be given up to other food-grains and oil-seeds : 2½ acres will be set aside for turnips and other fodder, and the remaining acre will yield tobacco and other high-priced crops. In the Khusháb-Jhelum Circle there are only 18 acres of matured crop, 3½ in the *kharíf* and 14½ in the *rabi ;* these will be :—*jowár* and *bájra,* 1 acre ; other food-grains, ½ acre ; cotton, ½ acre ; fodder, 1 acre ; miscellaneous, ½ acre ; wheat, 10 acres ; fodder and turnips, 2½ acres ; melons, tobacco, etc., 1 acre.

Water-level.

The water that has been poured on to the Jech-Doáb since 1901 has had a very marked effect upon the spring-level, and consequently upon the amount of labour required to lift a given volume of water from a well. The Canal Department have been carefully recording the extent of the rise, and the result for three typical sections is given below : line IX is a section through Bhera town and the off-take of the Chenab escape: line XI

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Agriculture and Irrigation.

Water-level.

roughly coincides with the western boundary of Bhera Tahsíl, and line XIII is a section through Shahpur and Sargodha towns :—

Section.	Period of which average is taken.	Depth below ground level of the water surface in feet						
		Chenab bank.	Buddhi *nala.*	Foot of *nakka.*	Top of *nakka.*	Highest part of the Bár	Foot of Danda.	Jhelum bank.
Line IX ...	1899—1903	20·45	30·5	47·69	61·99	73·17	26·84	10·79
	1909—1913	15·48	18·97	26·62	41·22	47·66	15·15	8·31
Line XI ...	1899—1903	15·92	21·84	54·26	69·21	68·03	10·60	14·99
	1909—1913	11·98	13·16	37·85	51·60	51·30	5·67	12·58
Line XIII ...	1899 - 1903	23·63	33·86	43·58	65·46	68·82	11·70	15·74
	1909—1913	18·0	25·94	29·43	51·20	55·49	6·28	13·63

Section B.—Rents, Wages, and Prices.

Rents, Wages and Prices.

Land-rents.

Of the total cultivated area of the district about 58 per cent. is held by tenants-at-will paying rents in cash or in kind to the owner or colonist Cash-rents are paid on 7 per cent. and kind-rents on 51 per cent. The most important factor in the relation of landlord and tenant is the rapid development of cultivation in the Western Punjab, and the consequent demand for more tenants in this and several other districts. This puts the tenant in a very strong position, and, especially on wells and inundation canals, the landlord has to put up with very careless cultivation and the devotion of large areas to fodder crops for the maintenance of the tenants' numerous cattle. It is only where there are unusual advantages of soil or water-supply, or where the cultivator is bound to the soil by strong ties of sentiment, that any landlord can begin to exact rack-rents.

Cash-rents.

The cash-rented area is mainly on the Lower Jhelum Canal; here the size of holdings in the proprietary villages, and the number of absentee landlords, encourage a system of contract under which the lessee pays all Government charges and a fixed rent per square or per *kila* in addition. It will be seen from Mr. Rudkin's assessment report on this area that this system is commonest in the proprietary villages, and in the auctioned blocks; and owing to the difficulty of inducing at

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Rents. wages and prices.

Cash-rents.

really good tenant to settle in the midst of cattle-thieves, the former command much lower rents than the latter :—

Circle.	Proprietary lands.	Auctioned blocks.	Crown lands.
	Rs. A. P. Rs. A. P.	Rs. A. P. Rs. A. P.	Rs. A. P. Rs. A. P.
Bhera Bár ...	5 0 0 to 7 0 0	7 0 0 to 12 0 0	4 0 0 to 7 4 0
Bhera Chenáb ...	2 0 0 „ 4 0 0	...	...
Sargodha Utla ...	4 8 0 „ 7 0 0	7 4 0 to 11 0 0	3 8 0 to 7 4 0
Sargodha Hethla ...	4 0 0 „ 5 8 0	...	7 4 0 „ 14 8 0
Shahpur Ara ...	3 0 0 „ 4 0 0	...	...

The normal range of rents per acre over and above the Government demand, received for various classes of holding in each circle, are here shown. But it may be remarked that the range given for Crown lands on the Sargodha Utla Circle is for blocks on the Northern Branch only; on the Southern Branch the range is from Rs. 9 to Rs. 14-8-0, and in some cases more than Rs. 25 is paid. On the other hand, the poor Sobhága lands of the Hethla Circle do not command more than Rs. 3. A good many of these rents date from a time when there was considerable uncertainty as to the productivity of the land and the water-supply. At present, the renting value of average land in the colony is probably about Rs. 10 per acre, exclusive of Government dues.

In the remainder of the district cash-rents are very exceptional, and are in almost all cases taken by owners who are for some reason prevented from collecting in kind. Details will be found in the assessment reports, but no valid deductions can be based upon the statistics.

Rents in kind.

By far the most popular method of fixing rents, all over the district, is the division of the produce according to a fixed share. Before division various deductions are made from the joint heap by the menials and village servants, and in many cases the owner, or the tenant, takes a small proportion on account of certain expenses; and even before the crop is brought on to the threshing-floor it has to submit to deductions on account of fodder cut green by tenant or landlord, or sheaves claimed by reapers, and hinds. All these customary allowances are noted in the record-of-rights, and the share of crop entered as the landlord's due must be understood to mean his share of

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the heap left for division on the threshing-floor, when they have been extracted.

Rents in kind

By far the commonest share taken by the landlord is a half of the grain and straw: this rate is practically universal on all canal and flood-lands, as well as on the best-embanked fields of the Hill and Mohar circles. On the wells, a half of the grain (sometimes with a small portion of the straw), is generally taken; but on the few wells now remaining in the Ara and the Bhera Bár, the landlord has still in most cases to be content with one-third. In the Thal one-third of grain and straw is the prevailing rate, but in that circle there is comparatively little tenant-cultivation (14½ per cent. of the total). In the Mohar 37 per cent. of the cultivated area held by tenants pays two-fifths, and 30 per cent. pays one third or less, and in the hills (in some of the weaker estates of the Tappa and Vanhar) 16 per cent. pays two-fifths and two per cent. one-third. Wherever the rate is now less than a half, there is a gradual tendency upwards towards that fraction, and it must, undoubtedly, be considered the normal rate for the district.

Rents on canal lands.

But although the share of produce taken on canal lands is everywhere the same, actual rents vary greatly in value according to the extent to which the landlord is able to saddle the tenant with a share of the Government demands on account of land revenue and water-rent. This is almost entirely a matter of local fashion, and is practically independent of economic considerations. With few exceptions the following rules may be said to hold good:—

I.—On the Lower Jhelum Canal (including *kharíf* distributaries):—

(*a*) *in old proprietary villages*—the tenant pays half the water-rate, and the landlord pays half the water-rate and all the land revenue. But on 23 per cent. of the cash-rented area in the Bhera Bár, the tenant pays half the land revenue as well as half the water-rate; while on 27 per cent. of the same area, the landlord pays the whole of the Government dues, but collects a contribution in cash of about Re. 1-4-0 per *kila* from the tenant.

(*b*) *in colony chaks*—the tenant in nearly all cases pays half the water-rate and half the land revenue; but on about 11 per cent. of the Sargodha Bár Hethla Circle the landlord pays all dues, and the tenant

pays a contribution of anything up to Re. 1-8-0 per *kila*.

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Rents, Wages and Prices.

Rents on canal lands.

II. On the Imperial Inundation Canals (*i. e.*, the Eastern and Western Station and Sáhíwál Canals) :—

(*a*) *in Jhawarián and villages to the east of it*—the tenant either pays half the water-rate and half the water-advantage-rate ; or else the tenant pays all the water-advantage-rate, and the landlord pays the remaining charges.

(*b*) *west of Jhawarián*—the landlord pays all dues. Altogether on these canals the owner pays 92 per cent. of the water-advantage-rate ; 98½ per cent. of the water-rate ; and all the fixed land revenue.

III. *On the Provincial Canals* (*i. e.*, the Ráníwáh and Corbynwáh) :—

(*a*) *on the Ráníwáh*—generally the tenant pays half the water-rate and half the water-advantage-rate ; but on 23 per cent. towards the tail of the canal the owner pays all dues.

(*b*) *on the Corbynwáh*—the landlord pays all dues.

IV. On the private canals :—

(*a*) *on lands owned by the canal-owner*—the owner pays the water-advantage and royalty-rates out of his half-share of the produce.

(*b*) *on lands owned by persons other than the canal-owners*—the canal-owner takes one-quarter of the produce (*chahāram*), and pays the royalty-rate. The subsequent adjustment between landlord and tenant is then made as follows :—

Method of adjustment.	Bhera.	Shahpur and Sargodha.
	Acres.	Acres.
Landlord takes ⅜ share and pays ½ water-advantage-rate ...		
Tenant " " " " ...	4,677	...
Landlord takes ⅜ share and pays all water-advantage-rate ...		
Tenant takes ⅜ share and pays no water-advantage-rate ...	...	3,085
Landlord takes ¼ share and pays ½ water-advantage-rate ...		
Tenant takes ½ share and pays ½ water-advantage-rate ...	50	540
Landlord takes ¼ share and pays all water-advantage-rate ...		
Tenant takes ½ share and pays no water-advantage-rate ...	2,128	14,771

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Rents, Wages and Pices.

Rents on canal lands.

From this it will be seen that rents are highest on Crown lands in the Colony, and lowest on the private canals of Shahpur Tahsíl As compared with the *chahárami* lands on the private canals, the lands irrigated by Government inundation canals give the landlord a better return, since the maximum water-rate is Rs 2-8-0, whereas the value of a *chahåram* is not less than Rs. 4-8-0 on an average and is often a great deal more ; so that a land-owner on a Government inundation canal who has to pay the whole of the water-rate is no worse off than a *chahåram* payer, who gets $\frac{3}{8}$ of the total heap, while an owner who can get half the water-rate from his tenant is at least Rs. 3-4-0 per acre better off than a *chahåram* payer who only gets $\frac{1}{4}$ of the total heap.

Deductions from the common heap before division

Large deductions are made from the common heap of grain before division between the landlord and tenant. These deductions are generally very considerable, and are usually made in the form of so many *topás* (a measure of capacity) per local maund or per plough paid to village artisans, menials and others who perform some service or have some claim, such as the blacksmith, carpenter and potter, the labourers who reap, thresh, win now or carry the crop, the attendants on mosque and guest-house, the barber and even the beggar who goes about the village. Some detail of these fees will be found further on under the head of village menials. In the assessment calculations liberal allowances have been made for all these deductions everywhere, amounting in the area under fixed assessment to one-sixth of the total crop on lands irrigated from wells, and one-eighth on other classes of cultivation.

In the perennially irrigated area there are great diversities of custom. Mr. Rudkin estimated the total deductions (including reapers' and cotton-pickers' wages, the fodder allowed to the tenant, and the seed supplied by the owner) to amount to the following percentages of the gross produce :—

Circle.	Percentage.	Circle.	Percentage.
Chenáb (Bhera)	12	Bár (Bhera)	15
Jhelum (Bhera)	13	Bár Uttla (Sargodha) ...	17
Ara-Jhelum (Shahpur) ...	14	Bár Hethla (Sargodha) ...	20

Division of fodder between landlord and tenant.

A further deduction has to be made in the area under fixed assessment for fodder allowed to be fed off to the well bullocks on land irrigated from wells. It is usual for the landlord to allow

Division of fodder between landlord and tenant.

the tenant to grow on the well two or three acres of turnips' *jowár* and other green crops, of which the landlord takes only a nominal share. Again in years of drought when fodder is very scarce, the tenant is allowed to cut the wheat green and to give it to his bullocks to keep them alive. In such a tract as the Ara Circle of Shahpur in a bad year as much as one-third of the wheat crop may be consumed in this way, the landlord practically getting no share of that portion of the crop ; and in *rabi* 1892 after an almost total failure of the winter rains, it was found that nearly the whole crop on many wells in the Chenáb Circle had been consumed green in this way, so that there was almost no grain produce on those wells, and it was estimated that half the area of wheat in that circle had been used up as fodder before it ripened. On the other hand, in the case of some classes of land, an addition has to be made on account of the share of the straw taken by the landlord, which is sometimes of considerable value. For instance, on *nahri* and *sailáb* lands, the landlord generally takes half the straw as well as half the grain. In the case of wheat the weight of straw averages 12 maunds per acre and its average price three annas per maund (in bad years it sometimes fetches a rupee a maund) ; so that the landlord gets on *nahri* and *sailáb* land about one rupee's worth of straw on every acre under wheat.

Cash value of kind rents.

According to the calculations detailed in the assessment reports, the average value of kind rents on each main class of soil in the different assessment circles is as follows :—

Tahsíl.	Circle.	*Cháhi*	*Nahri* or *ábi.*	*Sailáb.*	*Báráni*, I.	*Báráni*, II.	*Báráni*, III.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bhera ...	Chenáb ...	4 0 6	3 1 0	...	3 14 0	...	...
	Bár ...	4 14 6	7 3 0	...	3 6 0		...
	Jhelum ...	8 5 0	4 14 0	6 11 0	3 9 0	...	...
Shahpur ..	Ara ...	3 7 0	5 0 0	...	3 9 0	...	...
	Jhelum ...	5 5 0	3 6 0	5 11 0	1 12 0	...	...
Sargodha...	Bár Utla ...	4 14 6	7 8 0	...	3 6 0	...	...
	Bár Hethlá	4 14 6	5 3 0	...	3 6 0	...	...
Khusháb...	Jhelum ...	5 0 0	3 6 0	6 10 0	2 1 0	...	...
	Thal ...	...	...	...	...	...	1 0 0
	Mohar ...	3 4 0	3 4 0	...	3 4 0	1 13 0	0 15 0
	Hill ...	15 6 0	13 6 0	...	6 0 0	3 15 0	1 12 0

But, as already explained, there are considerable differences from village to village, according to the custom for adjustment of

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water charges, etc., and of course there is an even greater difference in the same village from year to year, according to the nature of the season. These averages are based on very cautious estimates of price and outturn, and allow liberal deduction for crop failure and expenses.

Wages.

A wages census was held in 1912, and it was found that the commonest rate for unskilled labour was 8 annas a day; but in busy seasons, *e.g.*, when the wheat crop is being harvested, or canal clearances are in progress, it is easy for an ordinary man to make from 12 annas to a rupee. The rate for canal clearance is Rs. 3 per 1,000 cubic feet, and the amount that can be excavated in a day depends upon the length of leading and the height of lift, but 250 cubic feet may be taken as a fair day's work. The Patháns who come down in the cold weather and engage in the building of mud walls and other earthwork make 12 or 14 annas a day. The wages of reapers (whose perquisites have already been described) approximate to a rupee a day: cotton-pickers are for the most part women and childern, and they are generally content with 5 or 6 annas; the harvesting of *mehdi* round Bhera brings in about 12 annas a day in seasons when the labour market is otherwise rather slack.

Ploughmen are usually paid wholly in cash, at rates varying from Rs 7 to 11 per month, or wholly in kind, taking a quarter of the crop.

For skilled labour, the usual rates are Re. 1 to Re. 1-4-0 a day for a carpenter or mason, and from 13 annas to a rupee for a blacksmith. But these workmen are also for the most part village servants receiving fixed allowances in kind for stated services rendered. It has been explained above that these allowances have been taken into account in calculating the value of rents. The rates vary from village to village, but the following table may be taken as showing the average in the old proprietary villages :—

Labourer or *kamín*.	Service.	NUMBER OF *TOPAS** ALLOWED.	
		Per well on *cháhi* lands.	Per plough on other soils.
Lohár	Iron-work	24	4
Tarkhán	Wood-work	37	5
Kubhár	Pottery	30	...
Musalli	General labour	75	10
Kubhár	Carrying the grain home ...	57	12

*A *topa* is a measure of capacity, practically equal to 2 seers in weight.

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Rents, Wages and Prices.

The salt miners of Warchha get about 8 annas a day, with extra emoluments for bagging and weighment. The coal miners of Tajúwála get Rs. 2 per day.

Variations in wages.

Fluctuations in wages-rates depend almost entirely on the local balance of supply and demand. If plague is abroad during the harvest season, the pay of reapers rises at once. If there has been a failure of rains in the Khusháb Tahsíl or in Miánwáli, the rates in Sargodha will fall, and if the irrigated harvest is short, as is apt to happen in a dry year, the rates will fall still further. Thus it happens rather paradoxically that wages will generally be lowest when the local prices of food-grains are highest. The range of wages is generally somewhat lower in the Salt Range than in the plains, owing to the greater density of the population, and the fact that earthwork is generally done by the system of co-operative labour, known as *vangar*.

The rise in wages.

It will be seen from Table 25 that there has been a very sudden rise in rates both for skilled and unskilled labour within the last 20 years, and especially within the last decade. Even at last settlement, the ordinary rate for unskilled labour was between 3 and 4 annas a day : the normal rate for canal excavation was Re. 1-9-0 per 1,000 cubic feet : skilled labour earned from 6 to 11 annas a day. As recently as 30 years ago, it was possible to engage a day labourer for 2 annas. In general it may be said that wages doubled between first and second settlements, and again doubled between second and third settlements. And with the new demand for labour on the Lower Bari Doab and Upper Jhelum Canals, and the prospect of railway construction on a large scale from Chiniot to Khusháb, there is likely to be a still further rise.

Prices of food.

Table 26 shows the retail prices of the principal articles of food in quinquennial averages up to 1900 and for every year since. In 1893, Mr. Wilson wrote as follows :—

Taking the average of the 15 years, 1850 to 1864, which cover the period of settlement operations, as representing the prices of last settlement, and the average of the last ten years as representing the prices now prevalent, it may be said that that quantity of each article which would then have fetched Rs 100 in silver, now fetches as follows : – Wheat Rs. 195, *bájra* Rs. 188, *jowár* Rs. 186, gram Rs. 189, barley Rs. 184, *tárámíra* Rs. 133, *guṛ* Rs. 155, *chína* Rs. 192, cotton Rs. 125, and *ghi* Rs. 179 ; that is to say, the principal food-grains—wheat, *bájra*, *jowár*, gram and barley, which together occupy three-fourths of the area under crop—have each increased in money value more than 80

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Rents, Wages and Prices.

Prices of food.

per cent. since last settlement, and the price of wheat, which is by far the most important, has practically doubled. Making some allowance for the distance of the peasant from market, and the low prices of the villages as compared with the towns, I have assumed the following prices as the basis of assessment calculations throughout the district (in seers per rupee) :—

	Wheat.	*Bájra.*	*Jowár.*	Gram.	Barley.	*Tárámíra.*	*Gur.*	Cotton, unginned.	*Chína.*	*Ghí.*
Fifteen years, 1850—64	41	47	52	51	57	36	17	15	69	$3\frac{1}{8}$
Thirteen years, 1865—77	26	30	34	32	38	32	13	11	41	2
Average prices for the ten years, 1878—87.	21	25	28	27	31	27	11	12	36	$1\frac{3}{4}$
Average prices assumed for assessment purposes.	25	30	35	35	40	35	15	15	45	2

For the six years since 1887 the average harvest prices for the district calculated in the same way have been as follows (in seers per rupee) :—

	Wheat.	*Bájra.*	*Jowár.*	Gram.	Barley.	*Tárámíra.*	*Gur.*	Cotton, unginned.	*Chína.*	*Ghí.*
Average price for the six years, 1888—93.	19	20	24	24	28	17	11	9	28	$1\frac{13}{16}$

The prices of all produce have, therefore, been considerably higher during the last six years than during the previous ten, and although at this moment (1894) owing to good harvests here and low prices in England, grain is cheap, there is no reason to suppose that the prices assumed for assessment purposes are in any case too high. Indeed in some cases they are obviously too low.

Events have shown that this last remark was fully justified, but in subsequent reassessments the same caution has been observed. The following rates assumed for assessment purposes by Messrs. Rudkin and Leigh are clearly very much lower than

Prices of food.

what the experience of recent years would justify :—

Prices in annas per maund.	Wheat.	*Bájra*	*Jowár.*	Gram.	Barley.	*Táramíra* or *toria*	Cotton, unginned.
Prices assumed by Mr. Rudkin	36	28	26	28	22	52	80
Prices assumed by Mr. Leigh	36	30	26	28 / (a) 24	24	42	88
Average note-book prices (1902—11) ..	38	34	32	31	26	..	97
Average note-book prices (1909—13) ..	47	42	41	36	35	61	107

(a) Assumed for the Thal Circle.

The history of prices since August 1914 is mainly a series of war speculations, prices rising and falling very abruptly in a manner entirely abnormal. So far as can be judged, the average of prices when peace is established is likely to be nearer to the average of 1909 - 13 than to that of 1902—11.

It has been calculated in the Assessment Report for Khusháb, and Bhera-Shahpur that the effective rise in prices since 1888 has been something like 35 per cent. and in 1888 the rise in comparison with the beginning of the regular settlement was shown to be 80 per cent., so the present range of prices must be at least 143 per cent. higher than those which prevailed 50 years ago, whereas since that time the incidence of the revenue has only been raised 40 per cent.

Causes and effect of rise in prices.

The main reason for the steady rise in prices is that there is an almost unlimited European demand for the most important staples produced in the district—wheat, cotton, and oil-seeds in particular—and the successful harvesting of an extra half million acres of crop, though an event of enormous importance to the district, has very little effect on the world-market. The direct communication with Karáchi afforded by the Jech-Doáb and Sind-Ságar Railways is of course a great advantage. Prices are very slightly affected by local abundance or scarcity; it will be seen from Section H that famine in the ordinary sense is unknown in this district; but when, as happened in 1908 and 1909, there is widespread scarcity in other parts of India, this district is at once able to reap the benefit of the high prices obtainable. When a fodder famine occurs, as happens not infrequently in Khusháb, large quantities of fodder are imported from irrigated tracts, including the Jhelum Colony, so that one part of the district benefits by the difficulties of another part.

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Rents, Wages and Prices.

Material condition of the people.

The standard of living of the peasants has been generally described in Chapter I, Section C, and various innovations in the matter of dress, housing, furniture and food have been noted. But neither the enhancement of wealth nor the accession of luxuries has been evenly distributed over the entire population. Much of the gain from improved prices has gone into the pockets of the shopkeepers, who have made more progress than any other class in the matter of housing and jewelry. Men drawing a fixed salary from Government are of course relatively worse off now than they used to be, for they have to pay cash for everything they eat or use, and cash prices, whether for food, clothes, house-rent or domestic service, have risen greatly, and there has been no corresponding enhancement of salaries. In Sargodha especially, where the standard of living and the scale of prices are such as might be expected in a young town of new found wealth, there are constant complaints from officials of the lower grades as to the difficulty of making both ends meet. In the case of officials who might have charge of a circle in the district, a transfer to tahsíl or district headquarters is regarded as a punishment, unless there is a hope of accelerated promotion.

It might be supposed that all who own or cultivate land must have benefitted greatly by the rise in value of their produce, but there are various reasons which tend to reduce the benefits actually received. Let us consider first the case of a tenant, with no land of his own. The supply of tenants is less than the demand for them, and so a tenant can generally take up as much land as he likes. But the amount of money he can save in the year depends upon the number of maunds of produce he can raise and the amount of dairy produce and stock which he can sell. He is in most cases incapable of intensive farming and only gets a moderate outturn per acre ; and he cannot plough or irrigate more than a limited area in the year. In other words his methods of cultivation are incapable of giving a very large yield in the year. Out of this yield he has to feed and clothe himself and his family, maintain his bullocks, pay the landlord his rent (which in most cases includes a share of the Government demand), and, it must be remembered, bear his share of the burden thrown on the community by the inadequacy of salaries alluded to above. Many tenants are clearly of opinion that what pays them best is to put under crop only enough land to produce grain and cotton enough for their daily needs, and to rely for their surplus on their live stock, which can be grazed free of charge on the village waste and the fallows and provide a form of produce in which the landlord claims no share and the Government no revenue. But the tenant is, if any

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thing, even less efficient as a stock-raiser than he is as a cultivator, and so he makes very much less income than he very well might. Now consider the case of the land-owner who does all his cultivation through tenants; it follows from what has been said that the crop brought on to the threshing-floor for division will be as small as the tenant cares to make it. And a landlord who tries to insist on greater attention to marketable crops and less to cattle and fodder, is apt to find himself left without tenants. Of the rent-receiving landlords, the private canal-owners are in far the strongest position; for they can attract tenants by the bait of a canal-supply for which no water-dues are payable, and no officials have to be propitiated. Hence they are in a position to insist that each tenant must grow a reasonable area of wheat and cotton. In these circumstances they are able to derive full benefit from the rise in prices, and there is no doubt that such of these men as take a reasonable amount of interest in their estates have enhanced their incomes enormously in the past forty years. There remain for consideration the landlords and colonists who cultivate all or some of their holdings themselves. The amount of money such men are able to save in the year depends partly on the extent to which their holding exceeds the area barely sufficient to maintain the family, and partly on the extent to which they are assisted in cultivation by relations and friends. If a man has only just enough land to support him and his family, he clearly has to make his surplus income by working as a tenant for some one else, and unless he can find a relation or friend to rent land to him, he will probably resort to the happy-go-lucky methods of tenancy described above. If he has more than he and his family can cultivate, he will clearly make a substantial surplus on the area self-cultivated (for he is practically supporting himself as tenant and paying rent to himself as landlord), and from the balance he will make much or little according as he finds tenants whose interests coincide with his own or not. Next to the private canal-owner, the man in the strongest position is the holder of a colony grant who can summon assistance from a congested home-village. One can generally recognize in the Salt Range the house of an Awán with squares in the colony. And similarly, if one rides from the Jhelum valley into the colony, one can see a marked difference in the relative appearances of domestic affluence. There are, of course, matters which affect all cultivators equally, tending to retard the rate of enrichment in relation to the rate of value-enhancements. These are (1) the increased expenditure on wages and material; (2) the periodical revisions of the schedule of water-rates, the land revenue settlement, the local cesses and

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so forth ; (3) the occasional necessity for having to buy back dear what he sold cheap at harvest time ; (4) the utter incapacity for business and organization which puts him at the mercy of the local shop-keepers, and prevents co-operation in the introduction of expensive improvements or collective bargaining.

There are two grounds for hope that in the near future the cultivator's material condition will improve even more rapidly than in the past : the people are no longer helpless in the face of plague ; they have learnt to evacuate their houses at the first sign of a dead rat, and they tolerate fumigation and other preventive measures ; hence it may be hoped that the ravages of the past decade will soon be made good ; and the co-operative movement has taken firm root ; the proportion of wealth remaining in the hands of the peasants will increase as the movement develops.

The classes that have no land and make their living by unskilled labour have gained considerably by the general rise in values. They are paid either in cash or in kind. If they are paid in cash, the rates of pay have risen more quickly than the price of necessities ; and if they are paid in kind, they get much of their pay in the form of high priced staples, while they are content to live on the low-priced millets, and pulses. In years when plague has depleted the labour-market, the reapers can make large sums, and there have been three such years in the last decade. Canal excavation is another form of employment which pays very well. But probably the improvement in their condition merely amounts to a greater ability to buy enough nourishing food and a more adequate wardrobe. Perhaps the year's savings will be invested in milch-cattle, if the labourer comes from a village where grazing is cheap. At most the unskilled labourer has hitherto only succeeded in attaining to decent comfort, and he has little margin for luxuries

Section C.—Forests.

Forests.

Reserved forests.

In Table 27 will be found the details of reserved and unclassed forests by tahsils. Recent measurements in Khusháb shew that the area of reserved forests in that tahsíl is 267,617 acres. These are of two distinct kinds, (*a*) the Salt Range Rakhs, which consists of hill-sides more or less covered with *phuláh*, *káú*, *sanattha*, and the other shrubs described in Chapter I : (*b*) the *rakhs* in the Chhachh and Thal, which are merely grass-lands with a sparse growth of *jand*, *ber*, *kikar*, *kari* and *lána* or *phog*. The former are controlled by the Extra Assistant Conservator, Jhelum Division, with head-quarters at Jhelum ; and the latter, together with the small area of reserved forest in the cis-Jhelum tahsíls, by the Extra Assistant Conservator, Chenáb Division, with head-quarters at Wazírabad.

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Forests.

Reserved forests.

A forest settlement was carried out by Mr. Wilson in 1897, and all questions of right were decided. In the Salt Range all *rakhs* except Sakesar and Keri are burdened with rights of grazing; in the plains, no right to graze is admitted, but in each *rakh* certain villages are allowed to graze. Both in the hills and in the plains the general practice is to lease the grazing for the year to the village or villages entitled or allowed to graze in each *rakh*, for a fixed sum, which the villagers recover partly by levying fixed charges on the animals of other villages and partly by distributing the balance of the demand rateably over their own animals. The usual method of rating is to assess camels, buffaloes, cows, and sheep or goats in the ratios of 16, 8, 4 and 1 respectively. In a few cases selected individuals are given the lease, and allowed to recover fixed rates from all cattle; and where no such individual has been selected and the villagers are unable to work the lease amicably, the grazing fees are realized by Government direct. In these cases the rates realized are :—

Kind of animal.	Tahsíl Bhera	Tahsíl Shahpur and Thal *rakhs* *	Salt Range *rakhs*.
	Rs. A. P.	Rs A. P.	Rs. A. P.
Camel	1 8 0	1 0 0	0 8 0
Buffalo	1 4 0	0 12 0	0 6 0
Cow or bullock ...	0 12 0	0 8 0	0 4 0
Sheep or goat ...	0 2 0	0 1 0	0 0 6

*There are special monthly rates in Rakh Rajar.

History of State lands.

The history of these State lands is thus given in the report of regular settlement :—

Prior to annexation no recognized village boundaries existed in the Bár and Thal jungles. Throughout this expanse, villages inhabited by various Muhammadan tribes, whose chief wealth consisted in cattle, were to be found very often at distances of 10 to 12 miles apart. Owing partly to the scarcity of well water, and to the dearth of rain which is a characteristic of the Shahpur climate, and to the presence of trees and shrubs on which camels feed, and to there being during some months of the year (if the fall of rain has been at all favourable) an abundance of grass, the people carried on very little agriculture, but kept up large flocks and herds.

Disputes relating to right to use of water more common than claims to possession of land.

As the villages were few and far apart, disputes about grazing ground were of rare occurrence. There was land enough for all. But sometimes a dispute took place about the right of watering cattle at a certain pond or natural tank. Two villages, situated a dozen miles apart, would perhaps in a season of drought, both assert a claim to water their cattle at a tank

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Forests.

Disputes relating to right to use of water more common than claims to possession of land.

equidistant between their villages. In the endeavour to enforce their fancied rights, a fight would ensue, and the victors would probably build a few grass huts for themselves and their cattle, in which they would reside for a couple of months and then desert the place for some better locality. The defeated party of one year often turned the tables on their adversaries in the year after, and took possession of the disputed water. Might was right, and beyond actual possession, there was no test by which to judge as to what lands ought to be considered as within the boundaries of any particular village.

Clever expedients resorted to by the people to obtain large grazing grounds.

When regular settlement operations commenced, the country having been annexed some five years, and the people having had such preparatory instruction as two summary settlements could afford, the *zamíndárs*, knowing our respect for prescriptive rights, determined to divide the jungle among themselves. They accordingly established little outposts, with a few men and a few head of cattle in each of them, at distances of several miles round the parent village, and proposed to encircle them all in one ring-fence which was to represent their village boundary. Had this arrangement been permitted, the result would have been that the whole jungle, which may hereafter become valuable property to the State, would have been appropriated by a few thousand cattle graziers, whose annual contribution of revenue does not in the aggregate exceed 35,000 rupees To show how preposterous were some of the claims raised, Mr. Ouseley mentions that the present area of *mauza* Lak, after converting large tracts originally included by the villagers in their boundary into Government *rakhs,* still exceeds 40,000 acres.

Change since annexation.

Before the commencement of our rule, owing to the lawlessness of the times, however far parties took their cattle from the villages during the day, they brought them back to the protection of the village for the night. After annexation people became bolder. Small parties of men who would formerly have been afraid to have separated themselves so far from the main village, during the next few years sunk a *kacha* well and built a hut or two, at some spot favourable for pasturage, five or ten miles from their village. More than this, as the people began to learn the weight which is attached by us to possession, they took to ploughing up and sowing small patches of ground not equal in size to a quarter of an acre, at distances of from three to ten miles from their villages, the object being to try and make good their title to all the intermediate grazing land between these patches and their village sites. Thus Mr. Ouseley writes (1859) : "Last year, when at Mitha Tiwána, I had to visit a spot which was the subject of dispute between the *zamíndárs* of Mitha and Ukhli Mohla, I found that the disputed boundary was nearly ten miles from one village and seven miles from the other. The dispute itself extended over five or six miles of desert and before I left the spot the *zamíndárs* of Roda in the Leiah district came up and declared that the land which I had been looking at belonged to their village, which was six or seven miles away. During my ride I was taken by one party or other to see the marks of their possessions, which were little patches of ground of the size of a quarter of an acre or so, scattered over distances of a mile or more from each other, in which somebody had sown a few seeds of *bájra* which had never ripened owing to want of rain. The existence of these spots appeared to be only known to a few men on either side; and on the recriminations which used to follow on

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Forests.

Change since annexation.

their being brought to notice, I believe they were ploughed up and the seed cast in secretly at night, and then neglected altogether, as the object was not to attract the attention of the opposite party to the progress that was being made in securing ground until the settlement *ahilkárs* should commence operations."

The principle for defining boundaries determined on

After much deliberation it was arranged that the demarcation of boundaries in the Bár should be carried out on the same principle as had been adopted in Gujránwála. The villages were called on to state how many head of cattle they possessed, and they were allowed an area of waste land calculated upon the number of their cattle, at 4 acres a head in the Bár and 10 acres in the Thal, five sheep or goats being counted as equal to an ox. In the Mitha Tiwána Thal Mr. Ouseley marked out boundaries arbitrarily, without reference to the numbers of cattle, or rather, to any exact scale based upon that number. The quantity of land that each village was entitled to being once settled, every effort was made to draw out boundaries with a due regard to existing possession, and where possession did not exist to prevent it, the village area was made of as compact a shape as was feasible. But so averse were the villagers to this arrangement, that they threw every obstacle in the way of the persons employed for the demarcation of their boundaries. The area remaining after this demarcation was constituted Government *rakhs*.

It might have been supposed that the plan adopted would have led the people to exaggerate their possessions, in order to obtain large pasture grounds, but such was not the case. The people of this country are everywhere suspicious, and here they seem to have thought that a trap was being laid to extract from them the real numbers of their cattle, in order that the information might be afterwards made use of to raise the assessment; they therefore, if anything, returned the number of cattle as too small. But the arithmetical standard was liberal in itself and was not too strictly applied, every care being taken that the area allotted to each village should be more than amply sufficient for its greatest possible requirements.

Subsequent history of State land

Between the first and Second Regular settlements, some 51,106 acres of this State land were granted on long lease for cultivation to various lessees; the bulk of this area was granted to those who undertook to irrigate the land from inundation canals of their own construction, or to individuals whose services at the time of the Mutiny required special recognition. Soon after Second settlement, it was decided that all the more important grantees should be given the option of purchasing their grants at a cheap valuation or of renewing their leases for the term of settlement, with the option of further renewals, but no right of purchase. Nearly all seized the opportunity to purchase their grants, and only 5,618 acres are now held on long lease. Other lesser grantees were given occupancy rights, as described in Chapter III, Section C. Others again, who had grants in the Bár, became colonists, and their grants are merged in the 436,273 acres of Government land allotted in the Lower Jhelum Colony.

CHAP. II C. — Forests. Unclassed forests.

Steps are being taken to disforest a considerable area of Rakhs Khabakki and Shin Dhakki, on the borders of Talagang, with a view to their being made over to the neighbouring villages for cultivation.

Of the unclassed forests, the only ones, which have any importance as fuel and fodder reserves are the strips of land along the Gujrát-Jhang road on either side of Shahpur, known as Chak Patri—north and south. These are fine plantations of grass and trees, interspersed with wells held by occupancy tenants, which are managed by the District Board.

Utility of the forests.

From the point of view of silviculture these forests are of no great economic value. Very few of them contain much timber, and there are no regular fellings and replacements. But as fuel and fodder reserves for the countryside they are invaluable, and in years of drought their existence is greatly appreciated by the villagers, as they contain much more vegetation than does the waste of the surrounding villages. They are also of value in the plains in that they add greatly to the financial success of large schemes of irrigation. There is of course a certain amount of friction between villagers and forest-guards, who are of necessity somewhat loosely supervised, and instances of incendiarism sometimes occur, but these are promptly punished by the closing of the forest to all grazing for a period of five years.

Section D.—Mines and Mineral Resources.

Mines and Mineral Resources. — Salt.

Salt is found all along the southern ridge of the Salt Range and especially near its base, generally associated with the red marl which is so conspicuous a feature of this part of the range. During the Sikh times the revenue from the excavation and sale of salt was realised by means of farms, the price at the mines being then one rupee per maund. It is now managed *directly* by the State, the price of salt at the mines being the actual cost of excavation plus the duty, which is at present (1915) Re. 1-0-0 per maund. There are outcrops of salt at many places, requiring to be constantly watched for fear of smuggling, but the only place in this district where excavation is now carried on is at the Rukhla Gorge about two miles to the west of Warchha. A portion of this mine was worked by the Sikhs, but their workings have now been abandoned as dangerous owing to no pillars having been left to prevent the roof falling in. The present workings are carried on on a scientific principle in a seam of salt, the thickness of which is 20 feet, increasing as it dips into the hill, the chambers and tunnels being so arranged as to leave a sufficient number of strong pillars to support the roof, and so as to admit the necessary amount of air to the workings. A new tunnel at a low level, commenced about three years ago, has proved some excellent

CHAP. II-D.

Mines and Mineral Resources.

Salt.

seams of salt, considerably thicker than those hitherto worked. Chambers are now being excavated in the thickest of these seams. The salt is remarkably pure, only about 3 per cent. being foreign matter The excavations are carried on by a special class of miners, called *wádhás* (cutters), 47 of whom are regularly employed, the rate paid them being Rs 5-8-0 per 100 maunds. They are a sickly race, owing no doubt to the bad air they breathe in the mines. Their net earnings amount to about 8 annas a day, but they work in the mines only for about 247 days in the year. These earnings the miners supplement by performing other duties, connected with the bagging and weighment of salt, for which they are paid at the rate of Re. 0-14-6 per 100 maunds. Their women carry the salt out of the mines on their heads, a common load being from 60 to 80 lbs. in weight. The price charged for the salt is $1\frac{1}{2}$ annas per maund in addition to the duty. The quantity of salt sold and delivered, which for the five years ending 1882-83 averaged 123,767 maunds, was as follows during the past 5 years :—

Year.				*Maunds.*
1910-11	...	...	...	152,722
1911-12	...	...	...	159,797
1912-13	...	...	...	156,231
1913-14	...	...	...	131,720
1914-15	...	...	...	141,554
		Average	...	148,405

so that the amount of trade done is greater than it was 30 years ago, although the Warchha mine is still 9 miles from the nearest railway station,* while the railway has been brought close up to its chief competitor, the Mayo Mine at Khewra in the Jhelum District, at which the cost of excavation is Rs. 6-3-0 per 100 maunds, but the same price of $1\frac{1}{2}$ annas per maund is charged for the salt. The Warchha salt is by some consumers considered to be of slightly superior quality to that of Khewra. The amount in stock at the end of the year was 12,440 maunds. The Warchha salt is carried away almost entirely on camels, and about three-quarters of the whole outturn is taken to Khusháb whence it is mainly sent by boat to Multán and other places down the river. Multán last year took 114,2[illegible]0 maunds : the other chief markets for this salt are Bhakkar, Khusháb and Jhang. The total realisation averaged for the three years ending 1914-15 Rs. 1,54,[illegible]28, and the total expenditure of the Warchha beat, which includes 33 miles of the range, averaged Rs. 20,042, being

*Since the above was written the laying down of a single 5 feet gauge line between Gunjyál Station and Warchha *Mandi* has been taken in hand, and is expected to be completed before the 1st April 1917. The opening of this line will give a great stimulus to the Warchha trade.

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Mines and Mineral Resources.

Salt.

12·97 per cent. on the gross receipts. On this beat there are employed a Superintendent and Inspector and 56 men, who have to guard 18 posts along the range, besides the mine itself. The Katha beat also lies partly in this district. Its total length is 40 miles, guarded by 10 posts, and its staff consists of one Inspector and 26 men, costing on the average Rs. 4,012 annually. No salt is excavated in this beat, and there is therefore no income. Notwithstanding the many opportunities for smuggling, this offence is very rare and no cases were presecuted in both beats during the three years ending 1914-15.

Potash salts.

As in the mines at Khewra and Núrpur, salts of potash occur in the salt at Warchha, distributed in irregular and discontinuous bands among the salt, from which it is hardly distinguishable in appearance. Up to now potash has been found in three chambers of the mine, and apparently these three occurrences are all parts of one potash band : if so, this band has a proved lateral extent of over two hundred feet. Exploration work has now been undertaken to ascertain more exactly the depth and lateral extent of the deposit. When first potash was encountered, it was considered to be inedible salt, and mining at that point was discontinued : its real nature was first discovered by an ordinary miner—Karam Iláhi—who had been transferred to Núrpur and set to work on potash deposits there. He drew attention to the similarity of the Núrpur deposits and the abandoned seams at Warchha.

Coal.

There are at present two coal mines being worked in the district, on the southern slope of the Salt Range east of Katha Saghral, *viz.*, Taju Wála and Jhakkar Kot ; they are connected with the Sind-Ságar Railway at Dhak Station by means of a light line 12 miles long. The seam of coal worked at these two places is of variable thickness, but averages perhaps 3 feet : it is worked by means of drifts from the outcrop, a wasteful method by which only the coal lying near the edges of the field is worked. The total quantity of coal in both areas has been estimated at about 1,250,000 tons. In quality it is similar to that of Dandot, *i. e.*, of the tertiary age ; it has been analysed as follows :—

	Taju Wála.	*Jhakkarkot.*
Moisture ...	5·08	7·60
Volatile matter...	31·01	35·66
Fixed carbon ...	37·31	46·50
Ash ...	26·60	10·24

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Mines and Mineral Resources.

Coal.

Excepting a small amount of excavation in 1890, the Táju Wála mine was first exploited on 1st April 1906; the Jhakkar Kot mine was worked from April 1905 till December 1909, and again from September 1912 it has been worked continuously. These two are collectively called the Katha Coal Mines and are leased to Messrs. Bhagwán Dás, Rám Dás, Contractors of Ráwalpindi, for 15 years, ending 15th January 1918. The terms of the lease are that the lessees are entitled to extract 1,040 tons every half year, on payment of a fixed rent of Rs. 130. For every ton of coal in addition exported or manufactured into coke a royalty of one anna is payable; ground rent is also charged at 1 anna per acre. Since 1910 the collections have been as follows:—

Year.	Outturn in tons.	Fixed rent and royalty.	Ground rent.	REMARKS.
		Rs.	Rs.	
1910	715	62	...	*Includes arrears for previous years.
1911	1,804	44	534*	
1912	3,227	243*	94	
1913	5,338	311	93	
1914	5,206	503	93	

In addition to these, two others, known as Chota Táju Wála and Shamilát Nalí, were worked from 1906 to 1909, and two, known as Pír Chan Pír Mine (Pail) and Nalí North, were opened up in 1908, but coal was never successfully extracted.

Lignite.

Small quantities of lignite have been found in the hills south of Sakesar, but not in workable quantity.

Gypsum, &c.

Gypsum and mica are common in places, and traces of iron and lead have been found in the Range.

Petroleum.

Tar-shows have been noticed in Rakhs Khabakki, Mardwál and Dhaddar. A license to prospect in this locality has been applied for by the Indolea Syndicate of 64, Cornhill, London, but has not as yet been actually granted. The Burmah Oil Company have also applied for a license to prospect in the same neighbourhood. In various other places in the Salt Range are springs the surfaces of which are discoloured by films of petroleum; such are those in the Sodhi Gorge, the Kuchhra and the Gosar torrents of Kufri, the Kalra spring just above Potha (near

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Kathwai), the Garháliwála Gorge south of Kuraddhi and Tiliotarwála in Uchhali.

The nummulitic limestone of which so large a portion of the hills is composed is used for building purposes, and great quantities of it have been removed from the mouth of the Rukhla Gorge near Warchha by the Railway Engineers and used as ballast for the line. In a year about 10,000 maunds of limestone are brought from the base of the hills to Khusháb and Dhak (a distance of 12 miles) on camel and pack bullocks and there sold at the rate of from Rs. 7 per hundred maunds to be used in the manufacture of lime or soap, or to be exported by boat and train to Jhang and Amritsar.

Lime.

In 1915 lime sold at Khusháb at 7 or 9 annas per maund according to quality. Since the opening of the railway a large business in lime-burning has been started close to the railway stations from Harriya to Bhera, lime stone being brought from the hills near Khewra by rail at a cost of Rs. 2-1-4 per hundred maunds, and wood got from the jungles of the Bhera Bár at a cost of Rs. 27-8-0 per hundred maunds. A hundred maunds of limestone give 60 maunds of lime. Altogether 10 kilns were at work in 1915 and the total outturn of lime was estimated at more than 35,000 maunds per annum. It sells on the spot at 7 annas per maund, but is mostly exported by rail to Lahore, Amritsar, Multán and other distant towns.

Khanggar.

A peculiar sort of limestone (*khanggar*) is found near Sodhi and at some other places in the range. It lies in strata just below the surface of the soil and when first excavated it is soft and easily fashioned into square blocks, but after a few days' exposure to the air it becomes hard. It seems to be of the same nature as *kankar* (*roṛe*) which is found in small calcareous nodules just below the surface of the ground at some places in the Bár, but rarely in such quantities as to make it useful for road-making or lime-burning.

Kallar.

Kallar shor is the term applied to the efflorescence which appears on the surface under the influence of evaporation and capillary attraction wherever there is much salt of any kind in the soil. Evidences of its presence are found all over the district, sometimes in the form of barren strips and patches in the middle of an otherwise fertile field. Where there is much salt in the soil, it is absolutely barren. *Kallar* is most prevalent in the tract along the foot of the Salt Range, beyond reach of the hill torrents, and in the Ara tract in the south of the Shahpur Ṭahsíl. There is a curious

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kallar plain immediately to the north of Sáhíwál. In Shahpur Tahsíl there is long strip of *kallar*-infected land stretching from Dhakwán to Bhakkar, and on along the line of the Didhar, which the inhabitants ascribe to the excessive saturation of the soil by the great flood of 1893. In this tract wells are useless, unless worked in conjunction with canal irrigation.

Saltpetre.

Saltpetre is manufactured in considerable quantities from the numerous mounds in the cis-Jhelum tract which mark the sites of former villages. A long narrow drain is dug on high ground and covered over with a filter made of twigs and grass, on which is sprinkled powdered nitrous earth from the old mounds. Water is then poured over the earth and filters through into the drain carrying with it in solution the salts contained in the earth. The dark brown liquid runs from the drain into a vessel placed to catch it, and from that is poured into a large iron pan, in which it is kept boiling until the solution approaches saturation when it is allowed to cool and crystallize. Its dirty brown crystals are crude saltpetre (*bugḍu*) which is usually sold to the refiners. This rude manufacture is carried on during the dry months chiefly by Hindus of the shopkeeper class who are required to take out a license and pay Rs. 2 for each pan used. It requires to be closely supervised to prevent the manufacturers from refining their saltpetre or producing edible salt. The manufacturer generally pays two annas a day to the owners of the nearest well who supply him with the water he requires; and he usually pays the landowners a lump sum, varying with the quality of the soil and the convenience of the site, for the privilege of being allowed to take the earth from the mound and fuel from the neighbouring jungle. In 1914, 21 mounds in Bhera and Shahpur Tahsíls were leased by the owners in this way for Rs. 10,355. Two mounds in Harípur are leased for Rs. 4,000, and one in Vegowál for Rs. 1,600; two in the Chak Patri for Rs. 1,920, and one in Jahánabad for Rs. 1,000.

The Crimean War and the Mutiny gave a great impulse to the manufacture of saltpetre, for the number of licenses to work pans rose from 694 in 1855 to 4,856 in 1858, and the selling price of crude saltpetre was then Rs. 4 per maund. In 1864 the number of licenses fell to 185, and the price to little more than Re. 1 per maund. The number of licenses granted in 1892-93 was 153, the number of pans at work 156, and the price of crude saltpetre from Re. 1-6-0 to Re. 1-12-0 per maund. The manufacture was carried on from about 80 mounds, chiefly situated in the Bar and Ara tracts. In 1914 only 24 licenses were

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granted, and only 24 pans were at work. The price of crude saltpetre has again risen to Rs. 4 per maund. The licenses are granted by the Deputy Commissioner.

Crude saltpetre, manufactured as above described, consists of a mixture of nitre, common salt and earth matter. It is refined at refineries specially licensed on payment of a fee for the year of Rs. 50. It is first dissolved in boiling water in an iron boiler till common salt is precipitated from the solution. The salt is removed and destroyed, and the boiling liquor drawn off into earthen vessels in which it is allowed to rest until earth and other impurities have settled. The clear liquor is then decanted and set out in a pan to crystallize. Next day the long pen-like crystals (hence called *kalmi*) which have formed in the pans are removed and stored for sale. In 1892 there were five licensed refineries in the neighbourhood of Bhera and Miáni with 41 boilers. Refined saltpetre sold at Rs. 5 or Rs. 6-8-0 per maund and 26 licenses were given in that year for the export of 10,832 maunds of refined saltpetre. About 6,000 maunds went to Sukkur and Karáchi for export to Europe and the rest went chiefly to Bannu and Ráwalpindi for the manufacture of gunpowder to be used in Public Works. In 1914, there were only 2 licensed refineries, with 15 boilers apiece. Refined saltpetre was in 1914 worth Rs. 10 to Rs. 13 per maund: 12 licenses were given for the export of 3,977 maunds, all of which (except for 200 maunds sent to Ráwalpindi and 70 maunds sent to Dera Ismail Khan) went to the Canal head-works at Mangla.

Barilla.

Barilla (*khar* or *sajji*), an impure carbonate of soda, is manufactured from the *khar* or *sajji* plant (salsola Griffithsii) which used to grow in great quantities on the hard clay soil of the Bár and Ara tract of Shahpur Tahsíl south of the Lahore road. There are two varieties of the plant, one with white and one with red flowers. It flowers in October and is cut in November when ripe, and left on the ground to dry. It is then thrown in bundles into a circular pit five or six feet in diameter and about two feet deep in which a fire has been lit and there burnt, care being taken not to let the fire get too low or be smothered by too much fuel, until the pit is nearly filled with the ashes of the plant, which melt into a viscous mass. The operation lasts about twenty-four hours, and the quantity burned during this time is from one to two hundred bundles, each of about half a maund in weight. The contents of the pit are then well stirred and allowed to cool, a little dry earth being scattered over the surface to prevent evaporation. The

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Mines and Mineral Resources.
Barilla.

pits are opened on the fifth or sixth day, when the barilla is found concreted together into a hard cellular mass something like the refuse of a brick-kiln. It is exported from this district chiefly to the north and east, towards Ráwalpindi, Siálkot and Jhelum, and is extensively used in the manufacture of soap, paper and coarse glass, in bleaching and dyeing processes, as a medicine and as a substitute for soap. The price of *khar* or *sajji* appears to have steadily risen. In Sikh times its price was 6 or 8 annas per maund, in 1866 it was Re. 1-2-0 per maund and in 1896 from Re. 1-8-0 to Rs. 2 per maund according to quality. The cost of manufacture is estimated at 6 annas per maund. The *sajji* plant is a favourite food of camels, and has to be carefully protected from them if it is intended to manufacture barilla. The plant was chiefly found in the large blocks of land owned by the State, and the right of manufacturing the alkali or of grazing camels on the plant as they found most profitable was annually sold to speculators. The income to the State from this source was Rs. 8,000 in 1865 and averaged Rs. 7,700 for the five years ending 1894-95. Previous to the severe drought of 1891 the income generally stood at about Rs. 10,000. It varied considerably from year to year, as the growth of the plant depends upon the variable rains, and as heavy showers in the season of manufacture (November and December) may greatly reduce the outturn. In an average year the quantity manufactured probably amounted to about 5,000 maunds. Since the advent of the Lower Jhelum Canal, the home of the salsola has been brought under the plough, and barilla is no longer manufactured in large quantities in the cis-Jhelum Tahsíls. An inferior kind of barilla *khar* is made by a similar process from another salsola (the *phissak láni*) plant near the foot of the Salt Range in the Khusháb Tahsíl. This sells at about 1 or 2 rupees per maund and is used chiefly for washing clothes. About 6,000 maunds of this inferior barilla are annually produced in the Khusháb Tahsil, whence it is mostly exported to Lahore, Amritsar, Siálkot and Multán.

Section E.—Arts and Manufactures.

Arts and manufactur[es].
Weaving.

In almost every village the cotton of the district is woven into coarse cloth (*khaddar*) from which the clothing of the peasantry is made and which is exported in large quantities, Girot and Khusháb being the centres of this trade. The weavers are usually Paoli by caste, and the importance of the cotton industry to the district can be seen from the fact that 37,132 persons were recorded in 1911 as subsisting on industries connected with the preparation and weaving of cotton: of this number,

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Arts and Manufactures.

Weaving.

16,831 were actual workers and 20,301 dependents, and of the workers, 6,490 were women, who do most of the spinning. The distribution over the different branches of industry is shown here. The extent to which handwork has been supplanted by factories will be discussed below :—

	Workers.		Dependents.
	Male.	Female.	
Cotton ginning, cleaning, and pressing	1,548	154	3,138
Cotton spinning, sizing, and weaving	8,793	6,336	17,163

Fine cotton striped goods bordered with silk (*lungis*) of good quality are made at Khusháb, where also are made good coloured *khes*, loom-woven checks, and diapered cloths (*bulbul chashm*).

Silk.

Pagris, and the other scarf-like forms of silk popular, are woven, sometimes plain and sometimes with gold ends, at Khusháb, which has a name for silk-weaving and has sent good specimens to various exhibitions. At one time about 50 looms in that town were producing *daryáis* and *lungís*, but now the weavers are finding it more profitable to produce the coarse cotton fabrics, and only 6 persons were returned as actually working as silk-weavers in 1911.

It may be mentioned that the flower-worked *chaddar* or *ohrni* of red or blue country woven cotton cloth ornamented with silk embroidery is worn in the district, but few are made for sale.

Wool.

Felt or *namda* rugs are made at Bhera and Khusháb, in both white and grey, unbleached or coloured wool, decorated with large barbaric patterns of red wool merely felted and beaten into the surface. The white felts bear no comparison with those of Kashmir and parts of Rájpútána, and the texture is so loose and imperfect that they seem to be always shedding the goat's hair with which they are intermixed The wool is not perfectly cleaned, and they are peculiarly liable to the attacks of insects. But they are among the cheapest floor coverings produced in the Province, costing Re. 1 per seer.

Goat's hair and camel's hair are worked up into rope, as in most pastoral districts. At Núrpur, *loís* or country blankets are made ; they have no special character of colour or texture, but are very durable and warm.

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Arts and Manufactures.

Cutlery and lapidary work.

The wares in wood and metal from this district which have been sent to several exhibitions, give an impression of great technical aptitude, which seems to find but little employment and scanty remuneration. It is a commonplace to say that there is in this country but little of the sub-division of labour, and none of the machinery, which make European products cheap; but even in India there are few examples of the union in one craftsman of so many trades as are practised by the Bhera cutlers. Long before the introduction of machinery the Sheffield cutlery trade was divided into many branches, and the man who forged a blade neither ground it, nor hafted it, nor fitted it with a sheath. At Gujrát and Siálkot the smith forges caskets and other articles of the *koftgar's* trade in complete independence of the workman who damascenes them with silver and gold. But at Bhera, the same artizan fashions the blade on the anvil, grinds and polishes it, cuts the hilts or handles from stone of mother-o'-pearl, and makes a leather covered sheath for dagger or sword. The favourite hilt is in the green, slightly translucent stone (*sang-i-yashm*) largely used in the *bazár* for amulets and neck beads, which has been identified as a very pure serpentine called Bowenite. It is found in masses in a gorge near Gandamak in Afghánistán where it costs Rs. 3 per maund, but by the time it reaches Bhera it is worth Rs. 40 per maund. Some of it is a delicate apple-green, and other pieces are like verde antique marble. It is very useful in mosaic work. Besides knife handles and dagger hilts, it is fashioned at Bhera into caskets, paper-weights, cups, &c. The work is always liberally smeared with oil to remove the white marks left by cutting tools.

A favourite form for a dagger hilt ends in an animal's head. In the collections of arms in the possession of some of the Rájpútána and Central India Chiefs, this design is seen beautifully wrought in crystal, and jewelled jade. The Bhera rendering is a very elementary attempt at a head.

Other stones used resemble Parbeck marble, and are found in the neighbouring Salt range. The names given are vague, and seem to be applied on very slight grounds. *Suleimáni patthar*, *sang-i-jarah*, *pila patthar*, *sang-i-marmar* are some of them, and they explain themselves. These are used for dinner knives and arms as well as for the ornamental articles made in stone.

A pretty herring-bone pattern of alternate zig-zags in black and mother-o'-pearl is frequently used for hilts. The mother-o'-pearl is imported from Bombay. The lapidary's tools in use differ in no respect from those in use at Agra, and indeed all the

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Cutlery and lapidary work.

world over where machinery and diamond-pointed drills are not used. A heavily loaded bow with wire string (or two for thin slices) is used for sawing, corundum and water furnishing the iron wire with a cutting material, while the grinding and polishing wheels are the usual discs of corundum and lac, turned with the drill-bow for small work, or with the strap for heavy; but always with the to-and-fro non-continuous revolution of Indian wheels.

The best country iron, known at Bhera as *dána*, is, in fact, a sort of steel; and when this is used, some of the blades of Bhera cutlery are of tolerably good quality, but it gets rarer yearly. Old files of English make are sought out and reforged into various forms. Old blades of stub and twist steel are often refurbished, and the *ab* or *jauhar* (the wavy markings in the texture of the blade) are still prized. These markings are rudely imitated for the benefit of English purchasers The blade is covered with a mixture of lime and milk, forming a sort of etching ground on which, as it is drying off, the artificer's thumb is dabbed, with the effect of printing the concentric markings of the skin. *Kases* (sulphate of iron) is then applied as a mordant and, when skilfully done, the effect is not unlike that of a real Damascus blade. No expert, however, could be for a moment deceived by this etching.

Wood-carving.

At Bhera *chaukats* or door and window frames are most elaborately carved in *deodar* and *shisham* wood. The rates at which these beautiful works are supplied to native purchasers are almost incredibly low, but as a European demand has arisen they have been raised. The work differs from that of Chiniot in that the projectieres are flatter, pilasters and other details being often merely indicated in relief instead of a half or quarter section being imposed. And the whole of the surface is completely covered with boldly outlined forms of foliage and geometric diaper made out for the most part with a V-section cut. There is something rude and almost barbaric in this direct and simple method of execution; but although there is no attempt at high finish, the general design and proportions are so good, and the decorative scheme is so full and complete, that the technical imperfection of the work as carving is scarcely noticed. A large door-way, completely covered with ornamental work, measuring ten feet high and of proportionate width, costs to a native purchaser about Rs. 150. Formerly such doors could be obtained for Rs. 25, but no use was ever made by the Public Works Department of this beautiful and wonderfully cheap carpentry. The production of these doors and windows is not confined to

Bhera; they are also made at Miáni* and perhaps at other places in the district. Wood-carvers from Bhera have been sent to more than one exhibition in England where they and their workmanship have earned admiration.

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Arts and Manufactures.

Sáhíwál lacquer.

The lacquered wood turnery of Sáhíwál differs from that of other places in being more crude in colour and simpler in execution. A particularly unpleasant *aniline mauve* is used; but there is a better class of vases, platters and toys made in two colours, red and black, or red and yellow, or black with either. The scratched patterns are bolder and larger than elsewhere and many toys, *e.g.*, children's tea-sets, are finished in transparent lac only, the colour and grain of the wood showing through. Chess-boards with chess men and a large variety of toys of forms that might puzzle an English child, are made at very cheap rates, but they do not seem to be as popularly known as they deserve to be. From the same town ivory toys of some neatness and skill in execution were sent to the Punjab Exhibition.

Combs are made at Núrpur from olive-wood got from near Kálábágh on the Indus.

Jewelry.

There is nothing very noteworthy or distinctive in the jewelry or silversmith's work of the countryside. From the chief places of the district, as well as from Mitha Tiwána, specimens have been seen which show an average of skill in work and design at least equal to that of most rural districts. Some account of the ornaments worn will be found in Chapter I. C,

Leather.

Good embroidered shoes are made at Jabba and Anga.

Tanning.

A cow's hide is the most generally useful, being strong and soft; a good one is worth Rs. 6. A buffalo's hide is the strongest of all, but very hard. It is used for shoe-soles, &c., worth about Rs. 9. A camel's hide is too hard for most purposes, but is used for making *ghi kuppás*: value Rs. 4. A bullock's hide is inferior in usefulness to a cow's hide. A horse's hide is scarcely of any use at all, being too thin and fine. A goat's hide is useful for parts of women's shoes, &c.: value about Re 1-8-0. The process of preparing a hide is as follows:—The skin is soaked a day and a night in water, then taken out and scraped; then spread hair downwards on straw, and after rubbing the upper side with one *chhiták* of *sajji* and one-and-a-half *sérs* of lime, and a little water, it is tied up with the *sajji* and lime inside. It is

*There is one specially fine example of a whole house faced with carved wood here: the door-panels have very spirited designs representing elephants, camels, artillery and cavalry in marching order, boxing matches, &c.

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then soaked for six days in two *sérs* of lime and water after which it is rubbed on both sides with broken-up earthenware. This is repeated at intervals till the hair is all off. It is then taken out, well washed and scraped, and has now become an *adhauri*, or untanned leather. The tanning process then begins. Well-bruised *kíkar* bark (*jand* is also used, but not considered so good) is soaked in water and the hide thrown in. When the tanning has left the bark, fresh bark is put in. This takes some days, after which the hide is sown up with *muni*, an aperture being left at one end, and hung up, the open end beirg uppermost. It is then half filled with bruised bark and water poured in, which, as it drops out, is caught in a vessel and poured back into the skin; this is continued until the lower part, when pricked, shows the colour of leather. The open end is then sown up, the other end opened, the skin inverted, and the process repeated with fresh bark, until the whole is tanned. The skin is then well washed, rubbed with the hand and dried in the sun. It is then soaked in water with bruised *madár* plants. *Til* oil is then rubbed over it, and it is again soaked a day in water. Then dried, sprinkled with water, rolled up, and beaten with clubs It is then rubbed on the flesh side with a stick, called a *weáng*, made from the wild caper (*capparis aphylla*) : the whole process in the hot weather takes about twenty-six days; in the cold, about eight days longer. Just before the skin is used, it is soaked for a day in little water with a *chhiták* of alum, four *chhitáks* of pomegranate bark, a *chhiták* of salt and a *chhiták* of *til* oil. During the day it is several times well twisted.

Earthenware.

In Khusháb are made jars and drinking vessels of earthenware which are much prized, as is the earthenware of Surakki in the Salt Range. The blacksmiths of Kufri are also noted for their ironwork.

Gunpowder and fireworks.

There is a considerable manufacture of gunpowder in the district at Bhera, Khusháb, Shahpur and other towns; the number of licensed manufacturers in 1915 was 32, and the total output about 385 maunds. It is made by mixing saltpetre, sulphur and charcoal in proportions varying with the quality of powder desired; the most usual proportions being a maund of saltpetre to 5 *sérs* of sulphur and 10 *sérs* of charcoal. These ingredients are mixed together and pounded in a wooden mortar (*chattu*), and when well mixed the powder is put in the sun to dry. It is then ground in a hand-mill (*chakki*), damped and rolled in a basket (*chajj*) till it forms grains of gunpowder. More than 300 maunds is exported from the district for use on public works as blasting-powder, and most of the rest is consumed

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Gunpowder and fireworks.

in making fireworks, of which the people are very fond, quantities being let off on occasions of marriages or other rejoicings. The fireworks of this district are generally very good and are of several different varieties of which the most common are the *golá*, the only merit of which is that it goes off with a loud noise like a cannon, the *ásmáni golá* which on bursting in the air falls in colored globes of fire; the *anár* which resembles a fountain of fiery sparks; the *chakkar* or wheel; the *matáb* or colored light; and the *hawa* or squib.

Soap.

Soap is manufactured on a small scale in Khusháb in the following manner. A maund of *khár* (*sajji*) and 20 *sérs* of lime are pounded up together and put into an earthenware vessel (*mat*) in the bottom of which a hole, the size of one's little finger, is made. Water is poured on the mixture and filters through the hole at the bottom where it is caught in other vessels. This solution is mixed with a maund of sesamum oil (*til ká tel*) and 10 *sérs* of fat, which have previously been heated and mixed up together. This mixture is allowed to stand for three days and then heated for two hours till soap forms on the surface, leaving the water below. The soap is then skimmed off and put into moulds; about 1½ maunds of soap being got from the above quantities of the ingredients. Six families of Khójás are engaged in this business and make about 300 maunds of soap in a year.

Factories.

There are 13 factories registered under the Factory Act in this district; their local distribution is shown in the margin; at the present moment only 4 in Sargodha and 2 in Bhalwal are working, 2 of those in Sargodha combining flour-milling with cotton ginning and pressing, and the remainder only ginning and pressing. Of the total number 1 is a foundry, and also does flour-milling and rice-husking in addition to ginning and pressing: 3 others combine flour-milling, rice-husking or oil-pressing with ginning and pressing: 4 do ginning and pressing only: and 5 do ginning only. There are also a certain number of unregistered factories, such as the ice factory at Sargodha, a ginning factory at Phularwán, and a press at Jhawarián, and there are several small oil engines working oil, and flour mills throughout the district. There is an important water-mill on the fall at the point where the Sulki Branch crosses the Shahpur-Sargodha road, which grinds the corn for Sargodha town.

Place.	*Number.*
Sargodha ...	8
Bhalwal ...	2
Sillánwáli ...	2
Phularwán ...	1

Labour employed in factories.

The registered factories now at work are said to employ 466 men and 55 women, while those out of work normally employ

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Labour employed in factories.

320 men and 47 women. No children are employed. This shows a slight advance on the numbers reported at the Industrial Census in 1911. The cotton-ginning concerns which do not also do any form of milling or oil-pressing are only seasonal in their working, and the labour they employ is really casual. It cannot be said that the population of the district has up to now gone far towards becoming industrialized.

Minor forms of mechanical energy.

At the same time there has been a very general substitution of simple forms of mechanical power for hand-labour. Nearly every large village has its *karás* or grinding machine; these are generally owned by carpenters, who grind the corn or press the oil for the villagers and take a *sér* in the maund. The water-mills in the Katha gorge are an ancient institution, and do a thriving business; Jabbi and Khabakki have started similar industries, and Sodhi Jai Wali is trying to follow suit. There is a great future for tube-wells worked by crude-oil engines, if only some enterprising person can be induced to make a start, and a repairing and inspecting agency can be arranged. The Director of Agriculture is considering the merits of the solar-motors in use in Egypt, with special reference to the conditions of Khusháb Tahsíl.

Section F.—Commerce and Trade.

Commerce and Trade.

General character of trade.

The general character of the trade of the district may be described as consisting in the export of agricultural and pastoral products and the import of such necessaries as cannot be produced locally, and what would formerly have been considered luxuries. The export of salt, coal, limestone, soap, gunpowder, etc., have already been described; they are of minor importance as compared with the trade in wheat, cotton, oilseeds, wool and hides.

The central marts.

From time immemorial the bulk of the trade has been focussed on the large towns—Bhera, Miáni, Khusháb, Sáhíwál—and these still retain some of their old importance. But since the development of the Jhelum Canal and the opening of the Malakwál-Shorkot Road Railway, the centres of trade have shifted to the series of colony-marts or *mandís* which have been built simply to facilitate the export of produce to Karáchi. These *mandís* are at Phularwán, Bhalwal, Sargodha, and Sillanwáli, and are privately managed by committees of *chaudhrís*. Generally speaking the cultivator sells his produce to a local trader, who transports it to the market, and sells it to one of the European export firms (Ralli Brothers, Louis Dreyfus, Sandy Patrick, etc.)

CHAP. II-F.

Commerce and Trade.

The Central marts.

or some large native merchant, through a broker (*ahrti*). About 20 per cent. of the produce is taken direct to market by the cultivators, and one landlord (Nawáb Mubáriz Khán) deals direct with the export firm. The broker will, if necessary, store the produce until it can be sent to Karáchi, charging rupee 1 per 100 bags for storage; he will also advance money, charging interest at rates varying from 10 annas to rupee 1 per cent. per mensem. From ½ to ¾ per cent. is charged as commission on sales, 1¼ per cent. for brokerage, $\frac{5}{16}$ or occasionally ¼ per cent. for weighment, and Rs. 2-9-0 per 100 bags for porterage and stocking. The export firms allow from 2 to 4 per cent. of barley in the wheat, and 1½ per cent. of dirt; if this standard is exceeded half the value of the excess barley and the full value of the excess dirt are deducted, but higher prices are paid for wheat which is cleaner than the standard.

Principal exports.

Some idea of the relative importance of the agricultural products exported will be gained from these figures of sales in the *mandís* for the last two years:—

Year.	Products.	PHULARWAN.		BHALWAL.		SARGODHA.		SILLANWALI.	
		Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
1914	Wheat ...	126,695	3,55,852	390,686	14,16,238	740,050	29,60,200	246,684	9,86,734
	Toria ...	68,534	3,32,009	211,164	9,49,485	225,000	10,12,500	75,000	3,37,500
	Cotton (un-cleaned).	58,308	5,23,173	85,402	5,85,070	18,000	81,000	6,000	27,000
	Gram ...	4,227	12,156	14,256	46,372	14,000	42,000	4,666	14,000
	Maize ...	...	...	...	...	2,500	7,500	833	2,500
	Millets ...	734	2,348	1,617	5,503	2,000	6,000	1,000	3,000
1915	Wheat ...	110,350	4,34,348	265,010	9,93,035	1,100,000	33,00,000	366,666	11,00,000
	Toria ...	36,067	1,63,487	108,164	4,39,712	675,000	30,37,500	225,000	10,02,500
	Cotton (un-cleaned).	43,451	1,98,574	56,024	2,95,072	36,000	1,44,000	12,000	48,000
	Gram ...	3,618	11,279	3,405	12,570	20,000	50,000	6,666	16,666
	Maize ...	...	...	...	...	2,700	6,750	900	3,250
	Millets ...	751	1,733	1,540	5,450	1,000	3,500	900	3,250

This shows that about Rs. 1,00,00,000 worth of the six main staples are sold at these four *mandís* in a year, and the bulk of this produce goes to Karáchi. There is of course also considerable traffic on the other branches of the railway; wheat from the Salt Range and the Jhelum valley, gram from the Thal, cotton cloth from Khusháb, *mehdi* from Bhera, wool, *ghi*, hides and bones

CHAP. II-F. Commerce and Trade. Principal exports.

from all stations, are all largely exported. The total figures of export and import for the 10 years ending 1910 on the Bhera branch line and the Sind-Ságar Line stations of this district are as follows :—

	TOTAL TRAFFIC IN MAUNDS (1901—1910).	
	Exported.	Imported.
Bhera line	6,606,739	10,755,896
Sind-Ságar line	6,564,901	2,109,865

Import trade.

The imports are almost entirely brought by rail and consist mainly of piece-goods and metals from Europe, sugar from Siálkot and rice from Pesháwar. During the cold season travelling merchants from Afghánistán bring down *majith* (madder), fruits, spices, gold coins, &c., some portion of which they sell in this district on their way through.

In seasons of drought, such as 1907, 1911, 1915, large quantities of fodder are brought in by rail from Lyallpur and other colonies (including the Jhelum Colony) to the Khusháb Tahsíl, and full use is made of the concession rates granted by Government on these occasions.

Trade by river.

The railway has, of course, greatly reduced the amount of river-borne trade, but it is estimated that in a normal year about 5,000 maunds of wheat and 10,000 maunds of gram go down by boat from Khusháb, Girot, and other points further downstream to Jhang and Muzaffargarh. At least 12,000 maunds of salt, and about 1,000 maunds of barilla, sugar, *mehdi*, spices, etc., are exported in a year in the same way, while there is also a certain amount of traffic in pottery and wooden articles of furniture—spinning-wheels, bedsteads, cots and so forth. Timber in large quantities is drifted down the Jhelum to the depôts at Chak Nizám and Khusháb, and it is said that in 1915 Khusháb contractors bought up supplies worth Rs. 1,00,000.

Balance of trade and import of money.

It is clear from what has been said that the district exports goods of far greater value than it imports. In addition to this there is a considerable sum of money annually paid to residents of

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Commerce and Trade.

Balance of trade and import of money.

the district in the form of pay and pensions by Government. So many recruits have joined, and are still joining, the army since the outbreak of war, that it is impossible to state the exact amount received as pay by soldiers, but before the war broke out more than six lakhs of rupees were drawn by residents of this district as pay from the Military Department, and Rs. 1,17,310 were drawn as military pensions. About one lakh of rupees was drawn by residents of the district employed within the district by Civil Departments and local bodies, and a considerable sum must be added to this for the pay drawn by persons serving elsewhere who remit their pay to their homes in this district. Civil pensions amount to over Rs. 66,000. Altogether 10 lakhs of rupees is a cautious estimate of the amount annually paid to residents of the district in the form of pay and pensions.

Section G.—Means of Communication.

Means of Communications.

Railways.

The progress of railway construction has been briefly indicated in Chapter I, Section B. The district is now served by (*a*) the Jech-Doáb Branch of the North-Western Railway, which passes through the greatest length of the Jhelum Canal Colony and gives through connection with Karáchi *viâ* Shorkot Road, Khánewál and Lodhrán : (*b*) the Sind-Ságar Branch of the same railway, which passes through the greatest breadth of Khusháb Tahsíl, and gives through connection with Karáchi, *viâ* Kundián and Sher Shah : (*c*) the Bhera Branch which joins Bhera and Miáni to the junction of the other two branches at Malakwál. There is every prospect of a new broad-gauge line being built from Ráewind to Khusháb, and this will link up Sargodha, Shahpur and Khusháb by an almost straight line with Bhatinda and Delhi. There is also a scheme (not yet sanctioned), for a narrow-gauge line from Bhera to Shahpur. When these lines have been constructed, the only parts of the district not within easy reach of a railway will be the Chenab Circle of Bhera Tahsíl, the river valley about Sáhíwál, the Southern Thal, and the Hills. The last-named tract will necessarily have always to rely on camels and donkeys to bring its wheat down to the plains, unless something in the nature of a ropeway can be devised.

Effect of existing railways.

The most obvious effect of the existing railway system has been that it has banished the fear of famine, and has done away with purely local fluctuations of prices. In the days before railways and canals existed, the district was entirely at the mercy of the rainfall; if the rain failed, food for man and beast was not to be had for any money : if the rains were good, grain and fodder

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Means of Communication.

were drugs in the market. It was the sudden fall in prices that rendered the first summary settlements unworkable; now-a-days it is only a fall in the world price that can seriously affect the district.

Effect of existing railways.

It cannot be said that improved communications have affected language or religion, though the popularity of railway metaphors in common speech may be noticed.

Roads.

For a district of such size and wealth Shahpur is singularly ill-supplied with metalled roads. There is a good metalled road from Khusháb station through the bazaar to the river bank, and on from the far bank to Sargodha and thence to Bhagtánwála. The road from Sárgodha to Sáhíwál has been metalled for half its length, and the road from Sargodha to Lakk and about a quarter of the distance from Lakk to Kalra is also metalled. Altogether there are nearly 81 miles of metalled road in the district, and another 5 miles (from Sillánwáli in the direction of Sáhíwál) are in course of construction. There is a fine unmetalled road running parallel to the Jhelum river from Gujrát to Jhang, through Miáni, Bhera, Chak Rám Dás, Jhawarián, Shahpur Civil Station, and Sáhíwál: there is a less good road on the opposite side of the river from Pind Dádan Khan, through Rajar, Khusháb, Girot and Khai Kalán. From Khusháb there are roads of a sort to Darya Khan and Miánwáli, by way of Mitha Tiwána. There are roads more or less passable for light vehicles from Gunjiyál, Khusháb and Rajar stations to the foot of the hills, leading to good riding roads up the face of the Range. There are tolerable riding roads joining up all the main villages of the Hill Circle. There are also feeder roads joining the river valleys to the Jech-Doáb railways, of which those from Midh Ránjha and Kot Moman, Bhera and Chak Rám Dás to Bhalwal, Jhawarián *viâ* Kalra to Sargodha; and Sáhíwál to Sargodha and Sillánwáli are the most important. The old high road from Shahpur to Lahore, *viá* Mitha Lakk and Pindi Bhattián, is not much used now, nor is the old road from Shahpur to Mari Lakk, and Kot Moman. The canal roads are all good, but not open to general traffic.

There are altogether 1,142 miles of unmetalled road maintained by the District Board. Generally speaking these roads are in most places and at most seasons more or less fit for wheeled traffic. Table 30 shows the certified distances between most of the principal places in the district.

CHAP. II

Means of communication.

Accommodation for travellers.

Table 29 gives a list of all rest-houses in or near the district, with the amount and nature of accommodation in each, and the department to which each belongs. Since 1911 new civil rest-houses have been built at Pail and Naushehra in the Salt Range, each containing one living-room, and two bed-rooms with bath rooms, and with a cook-house, two stables, and servants' quarters attached. The situation of these rest-houses is shown in the maps accompanying this volume.

Encamping-grounds.

There are encamping-grounds of the Military Department along the main lines of route as shown below :—

(1) *Jhang to Gujrát*—Nihang, Sáhiwál, Wadhi, Shahpur, Jhawarian, Chak Rám Dás, Bhera, Miáni.

(2) *Lahore to Dera Ismail Khan*—Laksin, Bhagtánwála, Mitha Lakk or Sargodha, Dhrema, Shahpur, Khusháb, Hadáli, Mitha Tiwána, Adhi Sargal.

(3) *Lahore to Bannu.*—As for No. (2) as far as Mitha Tiwána and thence to Gunjiyál.

There are also encamping-grounds at Nurewála and Katha Masral at the foot of the Salt Range on the roads from Khusháb to Sakesar, and from Khusháb or Kajar to Talagang.

Navigation

It has been shown in the preceding section that there is still a certain amount of river-borne traffic on the Jhelum, Khusháb being the principal centre of trade. (There is no traffic of importance on the Chenab.) There are 180 boats in the district, as against 238 at last settlement. The ferries on the Chenab and those on the Jhelum above Kohlián are managed by the authorities of Gujránwála and Jhelum Districts respectively. Of those shown in the margin, Khusháb is managed by the Deputy Commissioner, and the remainder by the District Board, and the right to collect the tolls was leased by them in 1915 for the sums shown against each. At Khusháb the ferry is during the cold weather replaced by a bridge of boats. There is a footway alongside of the Railway line on the Chak Nizám bridge.

Name of ferry.	*Value of lease.* Rs.
1. Kohlián	575
2. Bunga Surkhru ...	465
3. Sada Kamboh	435
4. Dhak	790
5. Chachar	} 800
6. Shahpur	
7. Khusháb	7,700
8. Tankiwála	440
9. Hamoka	} 1,030
10. Sheikhowál ...	
11. Thatti Hargan ...	490
12 Langarwála ...	1,245
13. Tetri	} 2,680
14. Jaura Kalán	
15. Majoka	
Total ...	16,650

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Means of Communication.

Post Offices.

A list of Post and Telegraph Offices is given in Table 31. There are now 17 sub-offices and 73 branch offices, as against 3 sub-offices and 43 branch offices in 1897. Table 32 shews that between 1891 and 1911 the number of articles received for delivery quadrupled, while the number of money orders paid and issued multiplied by 6 and 8 times respectively.

Telegraphs.

Besides the telegraph offices shown in Table 31, which are at the principal market towns on the Railway, and at Shahpur and Sakesar, there are also offices at the other railway stations. The Canal Department has telegraphic communication all along the main Canal lines, including the Shahpur Branch. There is a direct line between Shahpur and Sargodha. The Sakesar office is closed during the cold weather. Telegraphic communication between Naushehra and Khusháb would greatly facilitate the administration of the Salt Range.

Section H.—Famine.

Famine.

Famine.

The very fact that the rainfall of the district is always precarious has served as a protection against famine. In the old days the inhabitants of the Bár and Thal were constantly faced with the prospect of having to move off in search of pasture with their flocks and herds, while the dwellers in the river could rely on their wells for some sort of a living. To this day the same state of affairs prevails in Khusháb Tahsíl; when the rains fail part of the population migrates to the Indus valley, or, if need be, Kashmír with the cattle, and the remainder go as labourers to Sargodha or some other colony, where good wages are always to be had, even in the river-circles a large number of cattle will be sold in these circumstances for very low prices; but real famine, involving relief-works, is unknown; suspension of the revenue gives all necessary relief. To this extent there may be said to have been famines in 1886-87, 1891-92, 1896-97, 1899-1900, 1904-05, 1907-08, 1911-12 and 1915-16. Of these the year 1899-1900 was the worst, for both before and after it there were a number of poor harvests which diminished the accumulations of grain and fodder in advance and prevented a speedy recovery. At the present moment (June 1916) the Thal has had practically no rain since early August 1915, and the villages are forsaken. Large quantities of fodder have been imported by rail for such cattle as could not be driven off to Kashmír. A large number of cattle were sold for little more than the value of their hides.

CHAPTER III.—ADMINISTRATIVE.

Section A.—Administrative Divisions.

Executive and Judicial Officers.

The Shahpur District is under the control of the Commissioner and Superintendent of the Ráwalpindi Division, whose head-quarters are at Ráwalpindi. The ordinary head-quarters staff of the district, located at Sargodha, consists of the Deputy Commissioner, who is also District Magistrate, Collector and Registrar, one Assistant Commissioner, and three Extra Assistant Commissioners, of whom one is Treasury Officer and one is Revenue Assistant. The District and Sessions Judge also has his head-quarters at Sargodha, but some of the civil work of the Khusháb Tahsíl is undertaken by the District and Sessions Judge of Miánwáli. There is an Extra Judicial Assistant Commissioner as Sub-Judge, and a Subordinate Judge presides over the small cause court. The Khusháb Tahsíl is in charge of a Sub-Divisional Officer whose head-quarters are at Shahpur. Each tahsíl is in charge of a Tahsíldár, who ordinarily exercises the criminal powers of a second class Magistrate, the civil powers of a Munsiff of the third grade, and the revenue powers of an Assistant Collector of the second grade. He is assisted by a Náib Táhsíldár with similar criminal and revenue powers. The Bhera Tahsíl has also an additional Náib Táhsíldár in charge of the sub-tahsíl, which will, when the head-quarters of the tahsíl are transferred to Bhalwal, be located at Bhera. In Sargodha Tahsíl there is an additional Náib Táhsíldár in charge of colony business.

Revenue sta[ff].

The Revenue Record Staff, working under a District Kánúngo with one assistant, is of the strength shown below :—

Tahsíls.	Office Kánúngos.	Field Kánúngos.	Patwárís.	Assistant patwárís.
Bhera	1	5	76	3
Shahpur	1	4	73	3
Sargodha	1	4	51	3
Khusháb	1	4	75	8
District ...	4	17	275	17

The patwárís are graded on one list for the district, as shown in the margin. The assistant patwárís each receive Rs. 8 per month. An experiment is now being made in Sargodha Tahsíl, by which the number of Revenue patwárís is being reduced, and the Canal Department patwárís do all the work of crop inspection which was previously done by both

Grade.	*Pay.*	*Number.*
	Rs.	
I ...	15	69
II ...	12	138
III ...	10	68

CHAP. III-A.

Administrative Divisions.

Revenue staff.

departments. In the river circles of Shahpur and Bhera, and in the whole of Khusháb Tahsíl, the vagaries of the river, the existence of privately-owned inundation canals, and the rapidity with which *báráni* cultivation and partitions of common land are proceeding, combine to tax to the utmost the energies of the revenue staff.

Courts of first instance.

There are three Munsiffs for the trial of civil judicial cases, holding court at Bhera, Shahpur and Sargodha.

The official staff of the district is assisted by the following Honorary Magistrates and Judges:—

Name of gentleman exercising judicial powers.	NATURE OF JURISDICTION EXERCISED. Criminal powers.	Civil powers.	Powers exercised as a Bench, Section 15, Criminal Procedure Code.	Local area of jurisdiction.
Fazal Iláhi, Shaikh ...	...	...	2nd class ...	Town of Bhera.
Pir Bádsháh ...	...	...	Do. ...	
Lála Devi Diyál Sháh...	...	...	Do. ...	
M. Hansráj ...	...	...	Do. ... 28th March 1916	
D. Jawáhar Mal, D. B.	1st class, 12th October 1909	...	...	In the Bhera Tahsíl (exclusive of the town of Bhera).
D. Ganpat Rái ...	1st class, 28th March 1916.	...	...	Shahpur District (exclusive of Bhera Thána.)
M. Sher Muhammad Khán, Nún.	2nd class, 12th December 1914.	...	...	
Broadway, P. N. S., Mr.	1st class, 10th March 1914.	...	...	Shahpur, Bhera and Sargodha Tahsils.
Sir Umar Hayat Khán Tiwána, K.C.I.E., M.V.O., Honorary Captain, the Hon'ble Malik, of Kálra.	1st class, 6th August 1913.	...	...	Shahpur District.
Rái Sáhib Rám Dás Sahny.	1st class, 15th March 1916.	...	...	Kot Moman Thána, Bhera Tahsíl, 15th March 1916.
Rádha Kishan, Lála ...	...	2nd class, 10th August 1914.	...	Sargodha and Shahpur Tahsíls.
Chiragh Khán, Sirdár	2nd class, 24th June 1913.	...	2nd class ...	Sáhiwál and Núrpur Thánas.
Gur Saháí, Malik ...				
Bahádur Khán, Sardár	3rd class, 26th June 1914.	...	3rd class ...	Khusháb Tahsíl.
Tulsi Dás, Bhái ...				
Devi Diyál, Malik, of Miani.	1st class, 26th June 1914.	1st class, 15th July 1914.	...	Shahpur District.
Muhammad Hayát, Qureshi, Mián.	1st class, 27th October 1915.	...	...	Ditto.
Sirdár Khán, Nún, Malik.	2nd class, 19th May 1914.	...	...	Ditto.

CHAP. III-A — Administrative Divisions. — Villge officers.

It has already been shown that in the days before annexation by the British Government the whole of the plains portion of the district recognized the leadership of one or other of the local chieftains. Even in the Salt Range, where a democratic spirit and village autonomy were more developed, certain families have been recognized as qualified to take the lead in public affairs. But in many villages the appointment of village headmen must have been a very difficult or arbitrary proceeding. It must often have been much easier to say which out of several village headmen was best entitled to be appointed *halqádár* than to say which of the many landowners within the village should be appointed headman.

Zaildárs and Inámkhors.

At regular settlement certain allowances were given to leading members of the agricultural community in the form of a percentage on the assessment of the estates with which they were connected, to be deducted from the land revenue before payment into the Treasury. In return for these allowances they were expected in a general way to use their influence in their own and neighbouring villages in order to put down crime and aid in the general administration. In 1886 advantage was taken of the powers given by Revenue Rule 174 to define their duties and fix their responsibilities by putting each *inámdár* in charge of a circle of villages and requiring him to perform all the duties of a *zaildár* within that circle. This system was found to be of great advantage in all branches of the local administration. And the eagerness shown not only by the *inámdárs* themselves, but by candidates for the post among the more influential headmen, to distinguish themselves by assisting the various officers of Government who come into their neighbourhood, rendered work of all sorts among the villages much more thorough and satisfactory. It has however now been decided to carry this improvement out to its logical conclusion by introducing a regular system of *zails*. The number of *zails* sanctioned for each tahsíl is as shown in the margin; there are also in addition to the stipendiary *zaildárs* four honorary *zaildárs*, Malik Sher Muhammad Nún in Bhera, and Maliks Umar Hayát Khán, Muhammad Mubáriz Khán, and Khuda Bakhsh Khán in Shahpur who perform the duties of *zaildár* within the estates owned by themselves or their near relations. The *zaildárs* are assisted by 54 *inámkhors*, some of whom understudy the *zaildár* within a particular portion of the *zail*, while others act as assistants throughout the *zail*. The sanctioned emoluments and numbers of each grade are shown

Bhera ...	... 15
Shahpur ...	... 11
Khusháb...	... 23
Sargodha...	... 15
Total	... 64

CHAP. III-A.
—
Administrative Divisions.
—
Zaildárs and *Inámkhors.*

below. The Deputy Commissioner can make the distribution over tahsils as he likes :—

	1ST GRADE.		2ND GRADE.		3RD GRADE.	
	Rs. per annum.	Number.	Rs. per annum.	Number.	Rs. per annum.	Number.
Zaildárs ...	300	17	250	23	200	24
Inámkhors ...	120	10	100	24	80	20

In one or two cases, individuals who were formerly *halqádárs* and are now *inámkhors* are permitted for their life-time to draw the same amount of *inám* as they were doing under the old scheme, even though that amount be in excess of a 1st grade *inám.* A list of *zaildárs* and *inámkhors* is given in Appendix II, but the grading has so far only been announced provisionally, and is liable to be reconsidered at the end of the present war.

Village headmen.

At regular settlement, especially in the Khusháb Tahsíl, settled by Captain Davies, a systematic plan was carried out for reducing the number of village headmen, which had in the summary settlements been allowed to increase, with hardly any check, to a reasonable figure, so that they might form a class possessed of some weight and authority in the country. The opportunity of the first revision was taken by large numbers of the men who were then brought under reduction or their representatives to push their claims to reinstatement, and several hundreds of applications from such men and from new claimants demanding an increase in the number of headmen were presented. Very few of these were accepted, as it is undoubtedly an advantage to the administration to have the power, influence and responsibility of the village headmen confined to as few hands as possible. Where the number was increased it was on the ground that some well-marked division of the village landowners had been hitherto unrepresented, and was important enough to deserve a separate headman of its own. Headmen were also appointed in a number of new estates where none had hitherto been appointed, and of course each colony *chak* has been put under one or more headmen. At the recent revision a statement was prepared to show in what villages the number of headmen was still excessive, and proposals were made for reducing them as vacancies occur. This statement (in vernacular) is in the

CHAP. III.-A.

Administrative Divisions.

Village headmen.

Deputy Commissioner's office. The total number of headmen in the district is now—Tahsíl Bhera, 607 ; Shahpur, 427 ; Khusháb, 284 ; Sargodha, 370 ; total 1,688, and averages about 1·6 to each estate excluding forests, and about one to every Rs. 1,200 of land revenue. The average income of a headman from fees on the land revenue, water-advantage-rate and water-rates is about Rs. 100 per annum.

Lambardári squares.

In addition to the usual emoluments in the form of a cess on the land revenue and water rate, the headmen in Colony villages also have received grants of land, aggregating 7,197 acres ; such squares are resumed without compensation when a headman dies.

Tribal distribution of headmen.

A rough idea of the relative importance of the land-owning tribes may be got from the number of headmen of each tribe as shown in the following statement, in which, however, the number of Hindu headmen is unduly swelled by the figures for Bhera town where many of them are headmen of only one or two wells :—

Tribe.	Bhera.	Shahpur.	Khusháb.	Sargodha.	Total.
Ahír	2	5	5	...	12
Awán	27	9	108	23	167
Baloch	1	50	23	10	84
Jat	320	32	34	178	560
Kamboh	5	8	...	1	14
Khokhar	48	30	33	9	120
Pathán	17	13	5	10	45
Qureshi	5	12	9	3	29
Rájpút	52	224	50	81	407
Sayyad	25	28	12	9	74
Khatri	42	1	...	13	56
Arora	3	7	3	2	15
Brahmin	9	1	...	2	12

Detail of Jats and Rájpúts.

Tribe.	Bhera.	Shahpur.	Khusháb.	Sargodha.	Total.
Gondal	76	5	...	3	84
Ránjha	82	...	...	...	82
Mekan	1	48	...	5	54
Tiwána	...	14	25	6	45
Sikh	4	...	...	28	32
Bhatti	3	6	2	18	29
Waráich	12	...	...	13	25
Nún	16	8	...	...	24
Kaleár	3	8	...	12	23
Jhammat	3	18	1	...	22
Janjuha	6	2	8	5	21
Rihan	16	1	...	..	17
Hatar	4	13	...	...	17
Joya	...	5	11	...	16
Nissowána	9	...	...	6	15
Nagyána	2	7	...	5	14

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Administrative Divisions.

Village administration.

In every estate a *wájib-ul-arz* or village administration paper has been included in the record of rights, and sets forth in detail the rules adopted by the villagers for the settlement of such questions as may be answered by each village as it thinks fit, *e.g.*, the management of the common-lands, the collection of grazing fees, the distribution of the water brought down by torrents or springs, or the collection of petty taxes or cesses for purely local purposes.

Village cesses: *talukdári.*

A complete report on the various cesses realised in the district was submitted with Deputy Commissioner's No. $\frac{C.}{42}$, dated 20th September 1892, and has been separately printed. In some 30 estates in the north of the Khusháb Tahsíl a special rate of 5 per cent. on the land revenue was imposed by Captain Davies on outsiders who had obtained a proprietary footing in the estate, and conferred on a selected headman under the name of *hak ála lambardári* in addition to his ordinary remuneration of 5 per cent. as headman. By Government's No 196, dated 8th October 1893, it was held that this is not a cess at the disposal of Government but a *talukdári* due belonging to the whole proprietary body. The orders accordingly were that unless the proprietary body wished to have a special entry made in the administration paper saying that these *talukdári* dues are to be made over to a headman to be nominated from time to time by Government, then no entry whatever beyond the entry providing for the levy from the inferior proprietors of the *talukdári* due should be made. In no case did the proprietors agree to leave this income to one headman to be selected by Government, and it has therefore simply been stated in the administration paper of these estates that the due is leviable from the inferior proprietors (*málikán kabzá*) without stating to whom it is payable.

Tax on artisans.

In 1850, shortly after annexation, it was reported that in this district as elsewhere in Northern India a custom prevailed by which the village artisans either made a small payment in money or rendered some service in the line of their own particular occupation to the proprietors of the village in which they resided. In Sikh times the proceeds of this tax were realised as part of the income of the State; but the British Government relinquished it to the landowners. At regular settlement it was recorded as levied in 393 of the 667 estates in the district, and in almost all those estates it is still in force. It is ordinarily charged on weavers, washermen, butchers, cobblers, carpenters, blacksmiths, potters, silversmiths and barbers, but not on Brahmans, musicians, shop-keepers or sweepers. It is in

fact a tax on artisans and is called *kamiána* from *kamí*, a worker. Moreover when a man of the artisan class gives up his caste occupation and becomes an agriculturist he is exempted from the tax. The rates charged vary considerably in different villages, but the most common rate is two rupees per annum payable half-yearly by each adult male working at a trade, boys and aged men being let off with a lower rate. The total realisations for the whole district amount to about Rs. 11,000 yearly. The tax is generally realised by the village headmen through their private accountant (*dharwái*) and applied to the payment of the village watchman's salary, or credited to the fund for common village expenses, or in some cases appropriated by the headmen or the landowners of the village. It is in many villages strongly objected to by the artisans, who are generally led on by the weavers, and is evidently felt as a galling poll-tax, realised by the landowning class as a mark of superiority from the artisan class.

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Administrative Divisions.

Tax on artisans.

Malba.

Malba is the name given to the fund for common expenses of the village, and the *malba* cess is a cess levied for common purposes from the revenue payers in proportion to the land revenue payable by each. At regular settlement in all the papers of villages settled by Mr. Ouseley one uniform condition was recorded to the effect that only the following items should be chargeable to the village, *viz.*, fees on warrants for realisation of arrears, the patwári's writing materials, cost of feeding indigent travellers, and expenditure incurred by headmen when employed on business connected with the village,—the total expenditure not to exceed 5 per cent. Captain Davies, on the other hand, entered the *malba* at a fixed percentage on the assessment of the estate, generally at the following rates:—*viz.*, 5 per cent., where the assessment does not exceed Rs. 500; 4 per cent., from Rs. 500 to Rs. 1,000; 3 per cent. from Rs. 1,000 to Rs. 2,000; and 2 per cent. where the assessment exceeds Rs. 2,000. In these estates settled by Captain Davies the practice was for the headmen to realise the percentage fixed at settlement, and spend it pretty much as they liked. Dissatisfaction with the administration of the common fund is frequently expressed, and it is difficult to check the accounts. At Mr. Wilson's revision it was held that it was not advisable to interfere with long-standing custom, and the previous arrangements were allowed to stand, the former entries regarding *malba* being repeated with the addition that the headmen are bound to keep an account of the income and expenses of the common fund with some shop-keeper in the village, which shall be open

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to the inspection of every revenue-payer, and every half-year to explain the accounts of the common fund to the whole body of revenue-payers. The only exception to this action was that in some estates in which the percentage fixed was not in accordance with the general scale, or for other reasons was unsuitable, a different percentage was fixed as the maximum rate to be collected. No changes were made at the recent revision except that in cases where the headmen asserted that in practice they collected only such amounts as the accounts showed to have been expended, this fact was noted. The patwári's stationery is no longer a charge on the *malba*.

Other village cesses.

In 86 villages of this district a sort of octroi tax, called *dharath*, is levied on all sales of village produce to outsiders and on all purchases of outside produce by residents of the village, the most common rates being a quarter of a *ser* per maund (= 10 annas per cent.) on sales of grain and one *paisa* per rupee (= Re. 1-9-0 per cent.) on the value of other articles. It is usual for the headmen to give a contract for the year to some shop-keeper in the village (*dharwái*) who pays them a sum agreed on for the monopoly, and charges fees at the customary rates on all sales, the sellers being bound to come to him for weighment, and he in return being bound to weigh their goods for them. The income from this source aggregates about Rs. 2,800 per annum and is generally credited to the common fund or spent on such public objects as improving the village well or supplying oil to the village mosque and tobacco to the guest-house. In 57 villages a custom exists by which the landowners realise a tax, varying from Re. 1 to Rs. 7 on each marriage of a daughter of a non-proprietor. It is paid by the bridegroom's father and is called *jhajri* or sometimes *bakri* as it is often paid in the form of a goat or a sheep; and is appropriated by the owners of the land on which the bride's father lives or by the landowner on whom he is dependent.

Section B.—Civil and Criminal Justice.

Civil and Criminal Justice. — The Courts.

In the foregoing section it has been said that the Deputy Commissioner is District Magistrate, and mention has been made of the official and honorary magistrates. The District Judge has also been mentioned, and the Civil Courts, which are subordinate to him, have been described.

Number and nature of cases tried.

The statistics for the work accomplished by the Civil and Criminal Courts will be found in tables 35 and 34. The total volume of civil litigation is not unduly great and most of it calls for no special remark. There are however one or two classes of

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Civil and Criminal Justice.

Number and nature of cases tried.

cases special to this part of the Punjab, if not to this district. One is the class of cases (which may be either Civil or Criminal) arising out of the distribution of water flowing off the hills; another class arises out of a custom in the Thal which forbids the breaking up of waste land in the *maház* (*i.e.*, so as to restrict the catchment) of a pre-existing field; the nature and extent of the rights of owners and non-owners in the common grazing lands of the Thal will also have to be threshed out in the Civil Courts. The recent settlement has not added very seriously to the number of suits for enhancement of rent, etc.

Crime.

If allowance be made for the past history of the district its population is by no means seriously addicted to crime. The average number of persons imprisoned during the year has been 653 (including 20 females), or $9\frac{1}{2}$ per ten thousand of total population. It says much for the law-abiding character of the women of the district that each year only about one in ten thousand of them is convicted of an offence considered to deserve imprisonment.* The Hindús and Sikhs find their way into prison in much smaller proportion than the Musalmáns, the proportion of convicts per ten thousand of total population being 4 for the former and 10 for the latter.

Crimes of violence.

The character of the crimes committed is not such as to indicate any great moral depravity, but it shows that the peasantry are uncommonly hot-tempered, more so now than twenty years age. On the average of the last five years 27 murders or attempts to murder have been reported. Serious riots are of somewhat frequent occurrence, about 60 taking place annually, but they are usually unpremeditated, and are often occasioned by a sudden quarrel about land boundaries, irrigation rights, trespassing of cattle, building of walls and similar common incidents of a peasant's life. The parties to the quarrel lose their tempers, and strike each other with sticks or stones, and their friends on either side cannot resist joining in; and as axes and agricultural implements are always handy and make deadly weapons of offence, it too often happens that one or more of the combatants receives a fatal blow. When the fight is over, all are sorry for what has happened and they try to make it up among themselves, so that it is often difficult for the police to get evidence sufficient to convict in such cases.

* On the other hand there are far too many breaches of the unwritten law which custom has prescribed for maidens and young brides; these are not considered punishable by our Courts, but they have a disastrous effect upon the men's respect for law. There are many reflective inhabitants of the district who would amend this sentence to this effect: "A singular aspect of the law enforced in the district is that each year only about one in ten thousand of the women is considered to deserve the punishment of imprisonment."

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Civil and Criminal Justice.

Crimes of violence.

In 1897 the average number of murders or attempts to murder was only 12 per annum and of serious riots about 40, so it is clear that there is an increasing tendency on the part of aggrieved persons to take the law into their own hands, and that the majesty of the law is not sufficiently in evidence to deter them from resorting to violence. On the other hand the criminal courts are regrettably popular as a means of annoying neighbours who are not sufficiently offensive to be worthy of personal assault. These two tendencies—to break heads on slight provocation and to make criminal complaints without cause—interact on each other, greatly to the detriment of law and order. It will be seen from table 48 that about one case in four brought to trial results in acquittal or discharge; this is largely due to the frequency with which false charges are made; but the lively hope of escape encourages the hot tempered to bring their axes into play, and the apprehension that even a known murderer may easily be acquitted tempts the avengers of the victim to institute proceedings against all the connections of the real culprit, in order to ensure for them as much vicarious suffering as may be. Thus a vicious circle has been made, which can only be broken by a vigorous campaign against perjury.

By far the commonest cause of violent crime is sexual jealousy, or female emancipation. It has been shown in Chapter I, Section C, that marriageable girls are considered a valuable asset, and are generally not disposed of in marriage till they are well on in years. Sometimes the father or guardian of a girl waits too long, in the hope of getting a higher bride-price. In these cases the girl has generally set her affections on a man of her own choice, and if her father will not accept what he is prepared to offer, she will elope with him; sometimes the father persists in marrying her to a husband of his own choosing, and in these cases the bride will generally seize the earliest opportunity of making off with her lover. In either case there is all the material for a murder or else for a crop of cases, civil and criminal.

Burglary.

The only apparent effect on crime of the growth of the Jhelum Canal Colony has been an increased number of burglaries. The colonists are on the whole a law-abiding class, but they brought in their train as tenants and menials a certain number of undesirables, and the demand for cheap labour at harvest time draws a crowd of adventurers from the neighbouring tracts. To such as these the wealth of the colonist is a great temptation. The Jangli also, who now finds himself a substantial agriculturist neighboured by other agriculturists, equally substantial but inexpert in the indigenous sport of cattle-lifting, cannot ignore s[...]

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Civil and Criminal Justice.

Cattle theft.

easy a prey, and finds a congenial relaxation from his unwonted labour in his ancient hobby.

Although cattle theft is no longer easily first among the crimes of the district (for the last five years out of an average of 2,048 cognizable cases 184 were cases of cattle theft, as against 214 cases out of 1,005 in 1897) it still ranks next to burglary, with which crime it also overlaps.*

It is, as has been said, the traditional pastime and excitement of the cattle owners of the Bár, and until recently was not thought to deserve to be stigmatised as a crime. Indeed it is still the custom in some Bár villages not to invest any boy with the turban (*pag*) which is the sign of manhood until he has shown his title to the honour by stealing a bullock ; often in case of unpleasant consequences he is allowed to steal an animal belonging to a near relative to whom it is afterwards restored. A man who will not have anything to do with cattle-theft is looked down upon as a *masítar*, only fit to sit in a mosque (*masít*). The cattle thieves of the Bár now find profitable employment in stealing bullocks from the colonists or the cultivators of the river valleys who are less skilled in this business than themselves. The thief (*chor* or *kala*) loiters about the village and finds out where the animals are fastened and how they are guarded, and, generally on a moonless night, makes a hole in the hedge (*par*) or in the wall (*sannh*) of the enclosure or house in which the cattle are kept, gets out the coveted animal, and drives it away as fast as he can, choosing, if possible, hard ground where no tracks will be left, or places frequented by other cattle where the marks of their feet (*khurchhi*) are likely to obliterate those of the stolen animal. Sometimes to avoid the skill of the trackers he puts leather shoes (*khussa*) on the bullock so that it may not leave identifiable tracks, and he will sometimes put on and sometimes take off his own shoes with a similar object. When day breaks he leaves frequented paths, and drives the animal through the trackless jungle (*ohjár*). When he nears a village in which some accomplice (*rasseor*) lives, he ties up the bullock in some secluded spot (*ohr*) in the jungle, goes to his friend and either shows him the animal or tells him where he will find it. The accomplice at nightfall takes the animal on to some other receiver of stolen cattle (*rasseor*), while the original thief returns home to disarm suspicion; and so the animal is passed on from hand to hand along a chain (*rassa*) of receivers, until it reaches a great distance from the place where it was stolen, and is thought to be

*Thus out of 656 burglaries per annum (the average for the past five years), 112 were perpetrated for the sake of cattle, and these cases are not reckoned among cattle thefts.

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safe from pursuit. A stolen animal rises in value as it gets away farther from its owner's home. Receivers generally try to forward stolen animals into another district so as to delay police enquiries and the thief generally gets his reward in the form of animals elsewhere. Stolen cattle generally are sent south or east into Jhang, Gujránwála, Gujrát, Miánwali, Lyallpur, Montgomery, Muzaffargarh and Ferozepore, stolen camels towards Jammu, and stolen horses towards Lahore, Ferozepore and Amritsar.

Should the thief confine his operations to the Bár he commonly steals his animal while grazing in the jungle in the heat of the day or the darkness of the night, when the herds (*chheru*), generally boys or old men, are carelessly playing games in the shade or indulging in sleep. In such a case, the herd is often afraid to tell the owner of the theft and the owner does not discover that his animal has been stolen until some hours have elapsed.

When the owner (*sáín*) learns his loss, he does not as a rule inform the police but proceeds to make up a private search-party consisting of a few of his own friends and one or two skilled trackers (*khoji*), of whom there are many in the Bár, some of them well acquainted with the tracks of the noted thieves of the neighbourhood. He shows the trackers the marks made by the stolen animal, and they proceed to hunt for its tracks (*khure*). When they find them, the party proceed to follow up the tracks as fast as possible. Sometimes they find the tracks made by the thief on his way to commit the theft and the tracker follows them up backwards (*pichhure*) to see where he came from. As they go along after the stolen animal, one of the party now and then ascends a high tree or other eminence to get a look out (*tangu*) for the thief in the jungle ahead. When they come near a village or meet any one in the jungle they make enquiries as to whether the stolen animal has been seen and sometimes identify the thief in this way. When they lose the tracks in unfavourable ground, they make a round (*trédh*) in hopes of picking them up again. Some trackers are wonderfully skilful in following tracks and working out clues. Frequently they follow up and discover the stolen animal 50 miles or more from the place where it was stolen, the search having occupied several days. In one case a camel stolen from the Jhang District was tracked through Shahpur, Jhelum, Ráwalpindi and Pesháwar, and eventually recovered from the Khaibar. In another a mare stolen from near Shahpur was tracked across the Chenáb, Rávi and Sutlej and found in Ferozepore District.

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Cattle theft.

When the animal itself cannot be found but the tracks have led to near some man's well or cultivated enclosure (*vehr*) in the jungle, the search party seize on him and demand its restoration. If he is guilty and the evidence strong against him, he will give it up (in which case it is called *sagwan*) or more frequently will get it conveyed as a strayed animal to some pound from which the owner can get it, or will give some other animal in exchange (*wig* or *wigvan*) or purchase the owner's pardon by putting a shawl on the complainant's wife and calling her his sister. In such a case no malice is borne, but if he declines to return the animal or give some compensation and the owner still believes him guilty, a feud (*rehd*) results and the injured man watches his opportunity to get one of his enemy's cattle stolen in revenge or to do him some other injury. Should the accused person declare his innocence he is allowed to clear himself by the oath (*nian* or *visáh*) of some respectable person in whom the owner of the stolen animal has confidence. This person, if after enquiry he is convinced of the innocence of the accused, will swear to his innocence in some mosque or *khánqáh*, the usual form of oath (*soh*) being somewhat as follows: "God knows, the Prophet knows, and my soul knows, that this man is innocent and that he knows nothing about the theft."

Should the track party fail to find the animal, the owner sends word (*ahr*) to all his friends describing the brand and other marks of the stolen animal. When one of these men (*markhitt*), it may be years after, discovers the stolen animal, he informs the owner, and bargains with him for the price (*markhai*, of his information He then takes him to the place where he saw the stolen animal, often a matter of some risk, as in the Bár stolen cattle are often kept apart from the rest in charge of strong herdsmen prepared to resent the approach of any one come to identify them (*letu*). When he finds it, he may either endeavour to recover it by force, by bargaining, or call in the aid of the police.

Many, especially of the people of the Bár, consider it a point of honour not to call in the police till all other means have failed, so that many cases of cattle-theft are not reported at all, or are reported so late that it is impossible to obtain proof. There is, however, a growing tendency to invoke police aid, for although all are agreed that cattle-theft is becoming less common owing to the construction of canals and the spread of cultivation, the number of cases reported shows a tendency to increase. Some of the leading men of the Bár too are finding that it pays better to assist the authorities to put down cattle-theft than to share in the proceeds of successful thefts as a price for their aid or connivance.

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Civil and Criminal Justice.

Cattle theft.

In the Thal this laudable tendency has not yet become manifest to the same extent; and even in the Bár the sporting instinct sometimes outweighs the knowledge of what pays best. It was recorded by Mr. Wilson that "the women also, apparently, do not quite approve of cattle theft, for they churn the milk of stolen animals and even of their offspring separately from that of animals honestly come by." In this respect there would seem to have been a regrettable back-sliding; this pleasing indication of an active conscience is now practically non-existent. In fact it must, unfortunately, be admitted that at the present rate of progress the total abolition of cattle-theft, and even its reduction to limits at all creditable to the administration, will take an unconscionable time.

Lawyers and law-writers.

There are 8 Barristers-at-Law practising in this district, and 28 Pleaders (10 first grade and 18 second grade). There are also three *Revenue Agents* of the second grade, entitled to practise in the court of the Commissioner, and all courts subordinate to him. The sanctioned scale of petition-writers is 15 of the first grade and 10 of the second, but the numbers actually practising are only 13 and 36, respectively. There is a Bar Association at Sargodha, but no Bar library.

Registration.

Registration of deeds is mainly carried out by the non-official Sub-Registrars, who are Malik Muzaffar Khán at Shahpur, Díwán Jawáhir Mal* at Bhera, Sardár Bahádur Khán at Khusháb, and Mián Muhammad Hayát at Sargodha. All Tahsíldárs and Náib Tahsíldárs are joint Sub-Registrars *ex-officio*. Detailed statistics will be found in Table 37. The number of deeds registered yearly averaged 1,820 in 1897; in 1902 the number was as low as 1,402, but since then it has risen fairly steadily; in 1909 it reached 2,008, and since then the average has been 1,703. The value of the property affected has increased greatly; in 1897 it averaged less than 8 lakhs of rupees; since 1910 it has averaged Rs. 14,44,114. The great majority of the deeds affect immovable property, so it is probable that (as the *zamíndárs* freely assert) the recorded value is considerably inflated to defeat pre-emptors.†

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* Died since.

† The pre-emption law gives rise to many quaint tales, two of which may be quoted as specimens; though their historical accuracy is not guaranteed, they are current among the villagers:—

(1) A Canal subordinate purchased land which was expecting irrigation from a perennial canal; being pre-empted out of his purchase, he reported the land to be too high for irrigation, and the pre-empting village has never got its water.

(2) An artless rustic had sold some land to an outsider, who arranged to pay before the registering officer a very large sum, half of which was to be refunded so soon as the parties quitted the registry office. The rustic, suddenly finding himself in possession of undreamt of wealth, besought the officials to provide him with an escort as far as his home. The officials, quite

Section C.—Land Revenue.

Village tenures.

Tahsil.	CLASSIFICATION OF ESTATES.						
	Reserved forest.	Unallotted Crown estates.	Crown estates leased to colonists, lessees or tenants.	*Zamíndári* estates.	*Pattídári* estates.	*Bhayáchára* estates.	Total.
Bhera	3	...	61	18	...	205	287
Shahpur	2	...	10	33	19	201	265
Khusháb	74*	...	5	1	6	140	226
Sargodha ...	...	10	254	...	7	21	292
Total ...	79	10	330	52	32	567	1,070

* In five reserved forests in Khusháb some temporary cultivation by annual tenants is permitted.

The foregoing table shows the number of estates held in the various forms of tenure in 1915. Considerable changes in the number of estates have been made at the recent revisions of settlement, owing chiefly to the creation into separate estates of grants of State land to individuals. At regular settlement the total number of estates, *i.e.*, of areas for which a separate record of rights has been made, was returned as 647; now it is 1,070 of which 79 are reserved forests; 10 are unallotted Crown estates; and 330 are owned by Government, but allotted to lessees or colonists; of the remainder 52 are held on a joint *zamíndári* tenure and 599 are held on the *pattídári* or *bhaiyáchára* tenure, that is, the common land is owned on shares either according to fixed fractions or proportionate to the revenue paid by each individual owner. The prevailing tenure is the *bhaiyáchára* where the extent of possession is the measure of each man's rights; and if reference be had to the past history of the country, and the system of revenue management under the Sikhs, to say nothing of the vicissitudes to which societies and families are subject even under the best ordered Government, it will not

CHAP. III.-C.
Land Revenue.
Village tenures.

Captain Davies in his report on the regular settlement thus describes the causes which led to this state of affairs :—

"On the dissolution of the Mughal empire, anarchy for a long time prevailed, during which the country became the theatre of incessant fighting of tribe with tribe, varied by the incursions of the Afgháns. To this succeeded the *grinding* rule of the Sikhs when, as has been very truly remarked, 'the tendency was rather to abandon rights, symbols more of misery than of benefit, than to contend for their exact definition and enjoyment,' and if these causes of themselves were insufficient to weaken the strong ties that bind the peasant to the soil of his fathers, the occurrence at times of famines and other calamities would concur in bringing about this result. Nor are these the only causes that would tend to disturb the original equilibrium even where this had ever existed. Our every-day experience tells us that the several members of a family are not equally gifted. One is provident another reckless : one is pushing and active, while another is altogether wanting in energy. It is needless to say, that while the former passes unscathed through ordeals such as have been described above, the latter is forced to succumb to them. Again under such a rule as the Sikhs, the former would probably succeed in making a friend of the ruler for the time being, and with his assistance would extend his possessions at the expense of his weaker brethren ; and be it remembered *there was ordinarily no redress* should he presume on his influence to do this.

State of tenures at regular settlement

"Among all the villages of the district, 66 only retain the communal form of tenure, all the others having lost, or retained only in the shape of vague forms even the relation that exists in *pattidári* villages between ancestral right and the possession of land. In some few villages the relative rights of the members of the community according to the family genealogy are well known and could be accurately stated, but were found at the time of settlement not to have been acted upon for years, even for generations, and could not therefore be restored, the existing status being taken as the basis of operations. The distribution of the revenue among the members of a village accordingly is regulated solely by possession, each man paying upon the land held by him at rates varying according to the nature of the soil. In the Thal and Bár tracts, a portion of the revenue was thrown upon the cattle of the village, but this forms the only exception, common to all the district, to the rule as above stated. In the Bhera Tahsíl during the Sikh rule a house-tax, called *búha*, of Rs. 2, used to be collected from all the residents in the village ; and

the custom is still retained, a portion of the revenue being thrown by the people upon the houses and raised by a house rate, thus reducing the sum to be levied by grazing and soil rates." CHAP. III-C. Land Revenue.

State of tenures at the revised settlement.

At Mr. Wilson's revision of settlement it was found that the process of disintegration had continued The number of estates held joint had decreased from 66 to 55; and the owners of very few estates desired to pay their land revenue in proportion to ancestral shares, in almost every estate the rule of distribution being that each owner should pay the land revenue chargeable on the land of his holding according to class and soil. This was the rule followed even in the case of land irrigated by wells, except in the Ará circle of the Shahpur Tahsíl where the cultivation was almost entirely dependent on wells, and the ownership was by wells and land attached to them. In the estates of that circle and in a few others elsewhere the distribution of the revenue was made by putting a lump sum on each well and its block of land, this sum being distributed over the owners of the well in proportion to their shares in the ownership. As mentioned by Captain Davies, at regular settlement in the Bár villages a portion of the assessment was generally charged on the houses and another on the cattle of the village, but rights in the land had by this time become more valuable, and this mode of distribution was no longer desired by the people; so in all cases in that tract the whole assessment was charged on the owners of the land. In the Thal, however, it was still the general custom to charge a portion of the assessment on the cattle, the usual mode being to charge all the cropped area of the year at the uniform rate of four annas per acre except melons, which in some villages were exempted and in others charged at two annas per acre, and the remainder of the revenue was spread over all the cattle of the village, whether owned by landowners or others, in the following proportion: Camel 16, buffalo 8, cow or bullock 4, sheep or goat 1.

State of tenures at the recent revision.

The third Regular Settlement has not brought to light any great change, so far as the old established estates are concerned. In the Ará circle well-cultivation has almost disappeared in the presence of perennial irrigation from the canal. The Bár is, except for an odd remnant here and there, fully irrigated, and pays all its revenue on the land. In the Thal a certain number of villages have elected to impose the whole demand upon the land, raising or lowering the rate per acre, according as cultivation expands or contracts; but the majority of the villages adhered to the old system, though the tendency is everywhere to take

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a greater share from the land and less from the cattle. In the Mohar Circle several villages have set aside a fixed sum to be recovered from the owners of cattle, but in this circle there is no annual adjustment of the soil-rates to the cultivated area

Proprietary tenures.

From the remarks just quoted, it will be readily conceived that proprietary rights were somewhat ill-defined at the regular settlement; and that innumerable claims were set up, based upon the tradition of ancestral rights, but unsupported by recent possession. The manner in which these were dealt with is thus described by Captain Davies :—

Proprietary right at regular settlement.

"The causes already described had combined to produce the state of things described, and the status, *as found to have existed for a long period,* was accepted as the basis of our future operations both in our judicial decisions, and in the preparation of the record-of-rights and liabilities. Pedigree tables had been drawn out in the first instance; but it was found that although the genealogies of the village communities were well known, and there were often *tarfs* and *pattís, or* as they are called *varhis*, yet these had not been acted on for several generations. Possession in no way corresponded with shares, and the lands of proprietors of one nominal division were often found mixed up with those of another. The State dues during the Sikh times were taken in kind by *kankút* or *batái;* while items of common income, such as *dharat, kamiána,* and in the Thal, *pivi,* were appropriated by the headmen on the pretence of defraying village expenses. Since annexation the revenue has for the most part been paid on holdings by a *bigha* rate, or by a distribution on ploughs, &c.

"From the foregoing description of the conditions, under which proprietorship had existed for a period long anterior to the supervention of British rule, it will be understood that *possession* was the fact mainly relied on in the decision of disputes connected with the title to land. Suits of this kind may be reduced to three classes :—

I.—That in which parties out of possession sued those in possession for whole villages or for particular plots of land.

II.—That in which parties in possession of a certain portion of land sued a descendant of the common ancestor, in possession of a larger share, to obtain re-allotment in accordance with ancestral shares.

III.—Claims by collaterals against widows, daughters or sons-in-law of a deceased sharer, either to obtain possession of the inheritance or to restrain the parties in possession from alienating the same.

"The classification might be extended further, but the above divisions comprehend the great mass of litigation; and a sufficient general idea will be conveyed of the latter by following this arrangement, and describing the arguments ordinarily put forward on both sides.

Claims of the first class.

"Very strenuous efforts were made to recover possession of land of which the original proprietors had lost possession through accident, calamity, or as the result of their own improvidence, and fearful perjury was resorted to to obtain this end. Where the dispossession was beyond the period of limitation, it was generally alleged that the land claimed had been either mortgaged or lent

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Claims of the first class.

to the party in possession, but ordinarily no deed was forthcoming, and as in the majority of the cases this was only a device to obtain hearing for a very antiquated claim, and the defendant had admitted long possession on his side, the suit failed in its object. In other cases, the party in possession, mistrustful of the validity of his prescriptive title, would foolishly seek to strengthen it by the production of a fictitious deed of sale ; of course if he failed in establishing the genuineness of the deeds the plea was fatal, but I fear, that, in many instances, forged documents succeeded in passing for genuine ones, so carelessly were legal instruments of all kinds drawn up in former days. As often however, as good grounds for believing that perjury or forgery had been committed existed, a prosecution was instituted. In this way numbers paid the penalty of attempting to mislead the courts, and I have reason to know that these proceedings were attended with the best results.

Those of the second class.

"The second class of cases were, as a rule, very simple, as enquiry everywhere showed, that, as far as the memory of living men carried them back, possession had been unequal, and had constituted the sole criterion for regulating each man's rights and liabilities. With few exceptions therefore, claims to obtain re-allotment of land in accordance with ancestral shares were rejected. The exceptions were chiefly where land had been held undivided by the different members of one family, each having cultivated in accordance with his means and ability.

Third class.

"The third description of cases were more embarrassing, because, while throughout the district, and more particularly among the Awáns, the feeling against landed property passing through females is very strong, the dictates of natural justice disincline from passing orders the effect of which will be suddenly to deprive a man of land which he has cultivated for many years and has learned to look upon as his own. The voice of the country, however, was too strong to be directly opposed, and it was only by means of arbitration that, on the death of the widow, any portion of her deceased husband's inheritance could be reserved to her son-in-law. Attempts by the widow during her lifetime to effect the same object by means of a formal gift or fictitious sale of the property to the son-in-law were invariably disallowed as opposed to local custom."

Proprietary rights now.

The decisions given at regular settlement still form the basis of the system of proprietary right throughout the district, but there has been a great development towards further separation of rights and sub-division of the land. The total number of proprietors which at regular settlement was 33,641 was 87,943 in 1914, an increase of 161 per cent.; and the number of separate proprietary holdings which was at regular settlement 29,813 had increased in 1914 to 75,997—this great increase being chiefly due to partition and alienation. During the three years ending 1914, areas aggregating 218,196 acres were divided between the individual owners. This rapid separation of rights in the land is a marked feature in the progress of the district. It is, generally speaking, a great advantage, as an owner put in separate possession of his share of the land is likely to develop it much faster and cultivate it much better than he did when other

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Proprietary rights now.

shareholders might claim the portion of the joint holding in his possession. Compared with the advantages, the drawbacks are insignificant, but sometimes a passion for independent possession leads individuals to demand the partition of lands which are more useful when kept joint, for instance the steep hill-sides of the Salt Range, which lose much of their value to the community, if the cattle cannot wander over them at will. Another defect is to be noticed in the bed of the Jhelum; here too meticulous an insistence on distributive justice has led to the division of the islands into long narrow strips which can hardly be cultivated at all. At present partition is proceeding apace in Khusháb Tahsíl; the whole of that tract in the Mohár Circle which lies between the Railway line and the Thal Circle has been or is being dealt with, and it is almost certain that, as soon as the preliminary questions of right have been cleared up, the bulk of the Thal waste will have to be divided up.

In the Thal up to 1907, owing to the small value of the land a peculiar custom used to exist by which in most estates all residents, whatever their position or antecedents, were recorded as owners of the land they happened to cultivate. At Mr. Wilson's revision in those estates by common consent of the whole body of proprietors all residents cultivating land or paying grazing dues on cattle were admitted to be proprietors in the estate on almost equal terms with those who were entered as proprietors at regular settlement. In many of the Bár estates a similar rule seems to have existed at regular settlement, and almost every cultivator, whatever his caste or position, was then entered as owning the land he cultivated, now but in that circle rights in land had by 1890 become so valuable that the former owners nowhere agreed to admit new comers to an equality, and in that circle, as elsewhere throughout the district, only those men were recorded as owners who derived a title in the ordinary way from the owners of regular settlement.

Even in the Thal the old custom became impracticable, so soon as the possibilities of gram cultivation became generally known. It was obviously absurd that land capable of producing anything up to 20 maunds of gram to the acre should be acquired in full proprietary right by all and sundry in return for the trifling labour of driving a plough through the light soil and scattering seed. Consequently a wise Deputy Commissioner, Mr. C. H. Atkins, issued executive orders to the effect that in future those who cultivated in the common waste should be recorded as "co-sharers in possession" (if they already were share-holders in the common), or as tenants-at-will (if they were not). Thence for-

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Proprietary rights now.

ward the only method by which common land could be transferred to the holdings of individuals was by partition. Unfortunately it is by no means clear from the records exactly who are entitled to a share when partition takes place, and what the measure of right is to be. The commonest entry is to the effect that the shareholders are those who paid revenue on land and cattle, according to the share of revenue paid. But as the shares of revenue paid have fluctuated year by year, according to the extent of cultivation and the number of cattle, it is obviously very necessary to decide the year for which the revenue shares are to be reckoned. But various villages have various entries, and before partition can take place it has to be decided what is to be the measure of right for each village. Two leading cases were recently decided by a court of first instance, from which these principles emerged "unless the record of 2nd Regular Settlement gave some clear indication to the contrary, the measure of right must be held to be the revenue payable, either on land, or on cattle, or on both, according to the Record-of-Rights of 1st Regular Settlement." It is however possible that the findings in those two cases (Dravi and Adhi Kot) may be reversed on appeal, so the question of rights in the Thal waste has yet to be finally answered.

Málikán qabza.

In all estates including common-lands, it has been noted whether persons who have acquired land by sale, gift, or exchange, are also entitled to the share in the common corresponding to the extent of their acquired ownership. In any holding in which an owner is not entitled to the corresponding share of common-land that owner is known as a "*málik qabza.*" So far as possible, the Revenue Record has been made to show in all such holdings who is entitled to the share in the common-land.

Proprietary tenures in the Colony.

Out of a total area of 436,273 acres of Crown land allotted in the Colony up to the end of 1915 only 6,568 acres were given to individuals in proprietary right; these grants were made either by auction sales or by way of compensation for old proprietary land taken up by Government for roads, canal, etc.: 473 acres are under towns. It is therefore clear that no proprietary rights of any great importance have been created.

Fee-simple tenures.

There are only two estates in the district in which the land revenue has been compounded for by the owners. The whole of Ahírpur (an unirrigated village near Khusháb), and 3,000 odd acres of Jahánábád are owned in this way free of land-revenue for ever.

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Taalluqdári.

In a few villages in Bhera and several in Khusháb, *taalluqdári* or *ala malkíyat* rights exist. In the former tahsíl the *taalluqdárs* are generally residents of a parent village, or else the owners of land on which a *muvfidár* has been allowed to sink a well. In Khusháb the persons who were *málikán qabza* at Regular Settlement were often recorded as paying a *taalluqdári* due to the full owners ; this due is further described under Chapter III, Section A.

Riparian custom.

In 1897, Mr. Wilson wrote as follows with regard to boundaries in the bed of the Jhelum :—

"On the river Jhelum the boundaries of estates and holdings once fixed are not altered by the action of the river, but at the recent revision of settlement, owing chiefly to the inaccuracy and incompleteness of the previous maps, a dispute was found going on as to boundary between almost every pair of estates on opposite sides of the river. Complete and accurate maps were made including the actual bed of the stream, and all boundaries were authoritatively laid down in accordance with previous decisions. Now that the boundary fixed can be laid down with ease and accuracy from the maps now drawn to scale, it is probable that these frequent and troublesome disputes will become a thing of the past."

It was found, however, when new maps had to be prepared in 1912, that there were still many instances in which the maps of adjoining estates either overlapped, or left gaps of apparently unmapped territory, and several strips of land or water were claimed by two villages. All those defects and disputes were dealt with in the following manner : the Riverain Detachment of the Survey of India traversed the whole river bed, and laid down a series of pillars on both banks, according to a single system of squares for the whole tract : a large number of survey stations were also fixed on the ground, and the *patwárís* were supplied with mapping sheets, ruled in squares of the general system and with the stations exactly plotted. On these sheets the *patwárís* made their field maps, and as all villages had their squares based on one pair of co-ordinates any discrepancy in the boundary became at once apparent, and was eliminated. A single map has also been compiled on a small scale, showing the village boundaries in the river-bed continuously. If in future there is any boundary dispute, all that will be necessary will be to reconstruct a portion of the square system by linking up the base line stones on either bank, and then laying out the boundary according to the map of either village.

On the Chenab, the rule of fluctuating boundaries prevailed up to 1907, in which year permanent boundaries were laid down. Probably it will be found advisable, when next the Chenab Circle

comes under settlement, to employ the services of the Riverain Detachment. CHAP. III-C. Land Revenue. Rights of irrigation.

The rights of irrigation from each well used for that purpose have been stated in detail in the statement of rights in wells attached to the *jamabandi* of the standing record. Regarding rights of irrigation from inundation canals, both State and private, a separate map and file were drawn up and attested by Mr. Wilson for each canal (except the new Sáhíwál Canal then in process of development), but this was not made part of the standing record of the villages concerned. On Government canals no definite rights in water are acknowledged. A very important class of rights of irrigation is found in the villages in the Salt Range and along its base, where the cultivation is almost entirely dependent on the drainage from the higher ground or on the torrents from the hills above, and rights in the water are much more important and valuable than rights in the land. At regular settlement Captain Davies carefully recorded these rights, and at the subsequent revisions also special attention was paid to the correct record of all rights in torrents or in drainage water in this part of the district. In the case of most of the well-defined torrents the water is divided in accordance with traditional shares by erecting long embankments of stone and earth in the bed of the torrent soon after it debouches from the hills so as to divert the proper share of the whole water of the torrent towards the fields of those entitled to a share. Those fields are sometimes situated miles away from the point where the torrent is first divided, and on the way to them the water is divided into smaller and still smaller shares, until in many cases the share in the total volume of the torrent falling to a particular owner is only a very small fraction, and yet is necessary for the irrigation of his field far out in the plain. These rights are of the utmost importance, and have been very carefully attested and recorded in the administration paper of each village and also in the list of holdings (*jamabandi*). They are often the cause of feuds and riots, and any attempt to infringe them should be severely punished under the Penal Code. In the case of the smaller torrents generally and of drainage water flowing downwards in no well-defined channel, the usual custom is that the owner of the higher field can turn the whole of the water on to his field, and only when he has had enough or his embankment is breached by the accumulation of the water, is his neighbour lower down entitled to irrigation; and so from terrace to terrace the water passes down the slope until it has all been absorbed. In these cases also the right of each field to water has been carefully

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The method of attestation adopted in the recent revision was as follows:—A list of all fields, which were previously recorded as entitled to water or which were found to be actually obtaining water, was prepared for each village; in this the previous entries for each field were inserted, and explained with the aid of a coloured map to the cultivators. Wherever a change in the old entries was admitted or proved to be necessary, the necessary correction was made and attested either by the Tahsíldár or by the Collector. Wherever there was a conflict between present practice and apparent right, the fact that this conflict existed was noted. In all cases of dispute, the Collector himself determined what the entry should be. The results of this attestation were then incorporated in the village administration paper and in the list of holdings; and the field-lists and maps were filed in the District Revenue Record-room.

Tenancies.

Table 38 shows the number of tenancy holdings and the gross area held under each of the main forms of tenancy, as they stood in various years since settlement. But the figures for 1906 and onwards are somewhat vague; for though technically the grantees in the Colony are either occupancy tenants or tenants-at-will, they are for purposes of this table included among the self-cultivating owners. The general position may be described as follows:—In Khusháb Tahsíl generally, in the well-lands of the riverain and in the squares held by peasant colonists, the cultivation is mostly in the hands of the proprietary or colonist body; a large proportion of the tenant cultivation recorded is done either by mortgagors holding under mortgagees or by neighbouring owners. On the large estates irrigated by inundation canals and on the squares of *nazrána*-paying colonists, the cultivation is mainly done by real tenants, *i. e.*, by men who have no land of their own in the estate.

For the district, as a whole, it appears that 39 per cent of the cultivation is done by the owners or grantees themselves, 2·3 per cent. by occupancy tenants, 58 per cent. by tenants-at-will, and ·7 per cent. by squatters, etc.

Occupancy rights at regular settlement.

The following extracts from the settlement report will show how tenant right was treated at regular settlement:—

"The term 'hereditary cultivators' was not understood in the district of Shahpur for several years after the annexation of the Punjab; but enquiries showed that there were, in the river valleys at any rate, persons who, though they had no claim to proprietary title, asserted a claim to cultivate the land in their possession, subject to the payment of a rent more favourable than was demanded from the mere tenant-at-will. These men had acquired their rights by one of two ways. They had either broken up the waste land,

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(generally land on the banks of the river) and were called *abádkárán* or *banjarshigáfán*, or they had sunk a well on the land which they cultivated or had cleared out and put into working order an old well, situated in the land they tilled.

Occupancy rights at regular settlement.

"In either case, it was the custom to allow tenants of the above description a certain amount of indulgence, compared with ordinary tenants, in taking their rents by *batái* or *kankút*. If the prevalent rate for *batái* was equal division between landlord and tenant, then the *abádkár* or *banjarshigáf* was allowed to deduct out of the crop a certain portion, varying from one-quarter to one-half of it. In dealing with cases of this description, the Settlement Officer records that he first enquired whether the cultivator asserted any proprietary claim. As a rule, such a claim was rarely raised. Among Muhammadans the idea of hereditary property is very strong, and a man whose family has been one hundred years out of possession is still popularly recognised as the owner of what once belonged to his ancestors. Generally speaking, then, the cultivator at once answered that he was not the owner, but that such a person was. The privileges which either party possessed were then enquired into, and it was generally found that the cultivator, after paying his share of the revenue, enjoyed whatever profit was left on his cultivation, giving only five per cent. on his quota of the Government demand ordinarily in grain or kind to the nominal proprietor; but the cultivator was not allowed to transfer his rights by sale or gift or mortgage.

"The circumstances which produced this condition of affairs had next to be considered, and if it turned out that the cultivator had been enjoying favourable terms for such a length of time as to render it a matter of moral certainty that he must have reimbursed himself both the principal and the interest of his original outlay of capital or labor, then it was settled that for the future he required nothing beyond a recognition of his right to occupy the land he held, subject to a fixed money payment, which in such cases was assessed at an increase of from 35 to 40 per cent., including extra cesses, on the revenue demand of the land. Excluding cesses, 25 per cent. was the highest rate of *málikána* paid by any tenant. In those instances where it was found that the expenditure incurred by the cultivator had not been made good to him, a certain number of years, varying with the circumstances of each case, was fixed, during which he was to pay at certain favourable rates, and after the lapse of the period so fixed, his rent was to be brought up to the standard of similarly circumstanced cultivators. But it was only in the *bela* or *sailáb* land that an arrangement of the above nature could be made. Where the land was dependent for its irrigation on a well, other circumstances had to be taken into account, not only the original outlay, but the annual expenditure for wear and tear of the well and of its machinery. And as it is generally a very unsatisfactory arrangement to allow the landlord to undertake the repairs of the well, the cultivator always had the option given him of doing so; and, if he consented, then he was allowed to pay at revenue rates with an increase of from 12 to 18 per cent. which increase went to the proprietor as *hak-málikána*. The difference between the 12 or 18 per cent. and the 50 per cent. of profits remained with the cultivator to enable him to make necessary repairs; the proportion of the profits thus made over to the cultivator, varying of course with the nature of the repairs which he would probably be called on to execute. If the cultivator refused to undertake the execution of his own repairs, he received but a small share of the

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Occupancy rights at regular settlement.

profits, the bulk going to the landlord, who was in future to be responsible for keeping the well in fair working order.

"Out of 1,132 hereditary occupants of well lands, 564, or about half, kept the well in repair themselves, the proprietors being responsible for the repair of the wells irrigating the lands held by the remaining 568 cultivators

Of the former—	In the latter case—
215 pay from 5 to 10 per cent.	91 pay from 5 to 10 per cent.
241 " " 12 to 18 "	88 " " 12 to 18 "
14 " " 20 to 25 "	21 " " 20 to 25 "
90 " a lump sum in cash.	71 " a lump sum in cash.
4 " varying rates in kind.	297 " varying rates in kind.

"In addition to the above there were a few who, with the consent of the proprietors, were excused all payment on account of *málikána*.

"These remarks do not apply to the Kálowál Tahsíl or the Zail Músa received by transfer from Gujrát. In those parts of the district, the heavy assessments of the Sikh times had quite trampled out proprietary rights, and artizans, and village servants, and proprietors, all paid the Government revenue by an equal rate levied, generally speaking, on the number of ploughs employed by each man. In those parts of the district cultivators of long standing were recorded as owners of the land in their occupancy and they paid their revenue at the village revenue rates. They had of course no proprietary title in any of the village lands, except what was in their actual possession as cultivators.

"In the Salt Range and the Thal tenant rights were of comparatively small importance, for the number of non-proprietary occupants of land here is very inferior to the number in the other portions of the district. The hills and the Mohár are the only tracts where cultivation is carried on to any large extent, and these divisions are held by brotherhoods of cultivating proprietors of the Awán tribe, with few outsiders among them. The only exceptions are where whole villages belong to saintly characters, of which there are three in the Salt Range, and in the Mohár the villages owned by the Janjuha tribe. In the former almost the entire cultivation is in the hands of non-proprietors, the proprietors taking their rents by *batái* at easy rates, *usually* a third of the produce. In the latter, the Janjuha proprietors, through apathy and indifference, have allowed not only rights of occupancy to grow up, but have given opportunity to men of other tribes to creep in and supplant them in the proprietorship of a greater part of the lands still left to them by the Awáns. Of course these last are proprietors of their own holdings only, and have no share in the common land or common profits.

Occupancy tenants at second settlement.

At Mr. Wilson's revision of settlement the rights of tenants with rights of occupancy were carefully defined and recorded, but no attempt was made to classify them under the different clauses of the Tenancy Act. Only 16,526 acres in 4,315 holdings were then held with rights of occupancy. In the great majority of cases such tenants either paid rent in kind (3,588 acres) or in terms of the revenue rate with or without *málikána* (12,351 acres), and except in the few cases in which a regular suit for enhancement was brought, no change was made in the

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Occupancy tenants at second settlement.

rent except that in the latter case the tenant was made responsible for the new revenue due on his land with *málikána* on it at the old percentage. As in most cases the revenue due and with it the *málikána* receivable by the landlord were substantially enhanced, suits for enhancement of the *málikána* percentage were not numerous.

Occupancy tenancies now.

Except for cases in which by the failure of heirs or purchase by the owners occupancy rights have ceased to exist, there has in the proprietary villages been little change since second settlement. Mention must, however, be made of an important extension introduced by the conditions of colony grants. All 'peasant' colonists are entitled at the end of five years to receive rights of occupancy, provided they have observed the conditions of the grant: in the case of horse-breeding peasants no charge is made: other peasants have to pay two instalments of Rs. 2 per acre before they are recorded as occupancy tenants. Probably in course of time a considerable proportion of the 264,599 acres held by men of these classes will carry rights of occupancy; and up to 1915 more than 257,641 acres had actually done so. *Nazrána*-paying colonists obtained occupancy rights on entry: in the case of horse-breeders there was a sliding scale of *nazrána* from Rs. 6 per acre for 4 squares up to Rs. 22 per acre for 20 squares: where there were no horse-breeding conditions, the rates were trebled. Occupancy rights in 71,490 acres have been acquired on these terms. In a somewhat similar way Government in 1896 granted occupancy rights to a number of small farmers who had been cultivating State lands on lease for a number of years.

Colonists.

Although a number of colonists are already occupancy tenants and others have every expectation of obtaining that status, we may well consider the "colonists" as a distinct body of men, formed of various classes.

The areas held by each class are shown in the margin. The most important are the horse-breeders, who are bound to keep up in good condition a branded mare for every unit of grant, and to give the Army Remount Department the first refusal of the progeny. A more detailed account of the scheme will be found in Chapter II-A.

Class of Colonist	*Acres allotted.*
I.—Horse-breeders—	
(*a*) Peasant—	
(*i*) Cavalry	28,933
(*ii*) Others	165,770
(*b*) *Nazrána*-paying—	
(*i*) Stud-farms	6,754
(*ii*) Cavalry	6,925
(*iii*) Others	15,354
II.—Arboriculturists—	
(*a*) Nurserymen	2,183
(*b*) Planters	1,252
III.—Other colonists—	
(*a*) Peasants	69,896
(*b*) *Nazrána*-paying ...	42,457

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Colonists.

The difference between the peasants (*ghorípál abádkár*) and the *nazrána*-payers (*ghorípál sufed-posh*) is that the former each keep up only one mare, with a two squares (55 acres) unit of grant, on which they must reside, while the latter keep up two or more mares with a 1½ squares unit, and may reside elsewhere. There are six stud-farms, kept up by Capt the Hon'ble Malik Sir Umar Hayát Khán, Nawáb Habíb Ullah Khán, Nawáb Khuda Bakhsh Khán Rája Painda Khán, Agha Woosat Ali Khán, and Malik Muzaffar Khán. In all horse-breeding grants, succession is according to the rules of primogeniture. The arboricultural colonists hold their lands on a 20 years' lease, subject to resumption in the event of previous death or breach of conditions. A nurseryman (*zakhíradár*) ordinarily receives 10 *killas* (rather more than 11 acres), 3 of which have to be set aside and maintained as a nursery for young trees. A tree-planter (*darakhtpál*) ordinarily receives one square, and is bound to plant with *shísham* or *kíkar* trees not less than two miles of roadside avenue, and to maintain the avenue in proper condition. The other colonists have no special conditions of service, having received their grants by way of reward or compensation, and are not subject to the rule of primogeniture, except in the case of grants of 4 squares and over. On the other hand, if a peasant of this class dies before he has acquired a right of occupancy, all his rights in the tenancy are extinguished. The difference between the peasants (*abádkárs*) and the *nazrána*-payers (*sufed-posh abádkár*) is that the unit of grant is for the former one* square and for the latter two or more squares, and whereas the latter obtained occupancy rights on entry, the latter only became entitled if still surviving after five years from the commencement of the tenancy.

These two classes may be cross-divided according to origin as shown in the margin.

Class of grantee.		*Acres allotted.*
Infantry grantees	...	29,287
Civil grantees	...	23,250
Jánglís	...	59,816

The infantry pensioners are mostly Jat Sikhs of Amritsar, Ludhiána, etc., with a sprinkling of North Punjab Muhammadans and Patháns. The Civil grantees are a miscellaneous collection, largely non-agriculturists and non-residential. The Jánglís are the old denizens of the Bár, very cunning with camels and cattle, but no farmers. The Cavalry horse breeders are principally Sikhs from the Central Punjab; the other horse-breeders are mostly Awáns, Tiwánas, Mairs, etc., from Shahpur and Jhelum, or Muhammadan or Sikh Jats from Gujrát, Gujránwála and Siálkot. Most of the colonists, with the exception of

*In cases of compensation, it may be less.

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the Siálkotís and Mid-Punjab Jats are comparatively poor cultivators and easy going, while the fact that the horse-breeders are insured by primogeniture against over-crowding deprives them of one great incentive to industry.

Other lessees of State land.

In addition to the occupancy tenants and Lower Jhelum colonists, there are a certain number of other persons holding land under Government. These are (*a*) holders of land on long leases under the rules of 1897, (*b*) holders of land on annual leases, (*c*) a lessee who accepted a grant in Maddatábád, south of Shahpur, in exchange for land which he had to abandon in the Civil Station at Sargodha. The district board is allowed to manage the Government lands along the Bhera-Sáhíwál high road, known as Chak Patri, and in the Shahpur Civil Station. Regimental stud farms occupy 8,164 acres in the Colony, and the seed-farm at Sargodha 170 acres. A few cases were found in which old canal beds, technically the property of Government, had been brought under cultivation. In these cases the persons in possession were evicted, if the canal bed was required as a drainage-channel; otherwise the ownership of the land was given up to them. A big block of land in Rakhs Khabakki and Shin-Dhakki is now being disforested and leased to the villagers of Khabakki, Khutakka and Jába in exchange for some grazing rights which they have conceded to the Camel Corps. In other Government lands the orders are that no new leases, annual or otherwise, are to be given out at present.

Tenants-at-will.

The areas held by tenants-at-will in 1912 are shown in the margin. The tenants who pay in terms of the land revenue (as a rule without *málikána*), are for the most part neighbours cultivating for an owner or squatters in the Thal or in the common lands of the village. In the old days when land had little value, and the proprietary body were glad of any assistance in meeting the revenue-demand, such squatters were often encouraged : now that all land has a very appreciable value the owners would often like to evict them, but find it very difficult to take concerted action. As partitions are carried out, these men will either be evicted or will succeed in proving adverse possession, and so will acquire the status of owners.

Kind of rent paid.	*Acres held.*
Revenue rates with or without *málikána*	71,494
Rents in cash	15,478
Rents in kind	621,806

The rents paid by ordinary tenants-at-will in cash and in kind have already been fully discussed in Chapter II, Section B. These tenants have no greater security of tenure than that afforded them by the Tenancy Act.

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Kamins.

In the colony *Chaks* 10,858 acres have been set aside as *Kamíns'* squares; this means that in each village a few squares have been put at the disposal of the community who give 3 or 5 *killas* for cultivation to various village-servants and menials in payment for their services. In the old estates a small area of common land is sometimes given up to the 'Parish Priest' or some other servant of the public in much the same way.

Revenue administration under the Sikhs, cis-Jhelum.

Previous to the establishment of the Lahore residency, that portion of the Jach Doáb in which the eastern half of the Shahpur District is situated used to be farmed out by the Sikh Darbár to different *kárdárs* of more or less note. Guláb Singh, subsequently the Maháraja of Kashmír, for some years held the lease of Bhera. Kharak Singh, afterwards for a short time Mahárája of the Punjab, used to have the direct charge of the Sáhíwál Tahsíl, and Diwán Sáwan Mal of Multán sometimes took the farm of the Kálowál Tahsíl. These magnates were succeeded in the years immediately preceding the Sutlej campaign by men of less note, who had smaller tracts of country entrusted to them. But both they and their predecessors, as rule, collected their rent by *batái* (division of the harvest when reaped and threshed), or by *kankút* (appraisement of the standing crops) or by underleasing a few villages, here and there, for a certain cash payment to some person possessing a little local importance, who again made his own arrangements for collecting his rents according to one of the above described modes. As the principal lessee held his lease subject to renewal annually, of course any contracts entered into by him were only for a similar period.

Farmers collected their rents by *batái* or *kankút*.

The Sikh Darbár records uncertain guides.

The result of these arrangements was that the officers who first attempted to introduce the system by which the collection of the revenue was made in cash had very little reliable data to guide them. It is true that the archives of the Darbár could furnish them with the gross amount which used to be received into the Sikh treasury during a certain year for a certain tract of country; and so, again, the accounts rendered annually by the subordinate contractors seemed to show in detail the proportions in which the payments were to be credited to each village. But these accounts purported to show payments on account of revenue, and were no clue to the gross rental of each village; and it appeared from inquiry that the rent of the village was taken either by *batái* or *kankút*, the rate by which individuals paid varying in the same village from 50 to 25 per cent. of the gross outturn.

Disposal of grain collections.

The grain thus collected was often made over by the sub-lessee, who had agreed to pay so much for the year's revenue of a

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village, to the *kárdár* at something under its market value. The *kárdár* again often received credit in the Darbár treasury for the payment in cash of a certain sum on account of one or more villages by complying with an order to pay certain troops, stationed in the neighbourhood, their arrears of pay for a certain number of months. As these troops had been living on credit, the *kárdár* settled with them by giving so much in grain to the *banyás* to whom the troops were indebted for food and so much to the troops in cash. Seeing that the value of grain is continually fluctuating, it is obvious that when the payments made in that commodity travelled round so large a circle, the figures, which in the Sikh record exhibited the revenue of a village in money, were not of much assistance to the officer who had eventually to assess the revenue.

Peculiar system current in the Bár.

In the Sikh times the Bár jungle villages paid a lump assessment which was composed of a land tax, cattle tax and house tax. The inhabitants used also to pay another cess called *faroi*. The amount of this tax was very variable, and indeed its collection was accompanied with trouble. It was supposed to represent 25 per cent. of the value of the property annually stolen by the inhabitants of any particular village. However, this was an irregular source of income for the *kárdár* and was not included in the official accounts; consequently it formed no part of the data on which the assessments of the summary and regular settlements were fixed.

First summary settlement, cis-Jhelum.

However, when the Residency was first established, no better data than these accounts of the Sikh Darbár were procurable; and, as it was absolutely necessary that the land revenue demand should be fixed for the current year, English officers were deputed all over the country to assess the revenue of each village separately. The Government demand was to be fixed in cash, and each village was invited to enter into an engagement for a period of three years. The assessments were to be based on the Sikh returns, on which a reduction of 20 per cent. was to be allowed. Of course if particular circumstances seemed to require a large reduction, the English officers had the power to afford it. The term of this settlement expired in the Shahpur District with the Sikh year *Sambat* 1907, corresponding with A. D. 1850 Mr. Lewis Bowring, an officer who produced a very favourable impression on the people of Shahpur, and whose name was constantly in their mouths for years after his connection with the district ceased, fixed the assessments of the Bhera and Sáhíwál portions of the district. The

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Kálowál portion was assessed by Mr. Cocks, who, owing to press of work, had to fix his assessments at Lahore.

Working of first summary settlement, cis-Jhelum.

The Government demand was paid in full for *Sambats* 1904 and 1905 (A. D. 1848 and 1849). The collections were still made from individuals in kind, but they were paid during the former year into the Sikh, and during the latter year into the English treasury in cash. In 1850 a few balances accrued, but still, owing to the high price of grain, and to other causes which have been fully explained in other settlement reports bearing on the same period, the *zamíndárs* were able to pay the greater part of the Government demand during that year, and also during the succeeding year. But towards the close of 1851, a great cry of distress arose throughout the district, and as the period of the settlement made in *Sambat* 1904 had expired with the year *Sambat* 1907 (A. D. 1850) it was considered absolutely necessary that a revision of the demand should be at once effected.

Revision of assessments of the Kálowál Tahsíl

As Major Birch, the Deputy Commissioner at the time, had no assistant, and the necessity was pressing, Mr. E. Thornton, the Commissioner, determined to revise the demand for the Kálowál Tahsíl where the distress was the greatest. He accordingly, in the course of his tour, went to the village of Mángni in that tahsíl, and reduced the Government demand from one lakh to 75,000 rupees. This assessment was commenced and finished in three days, and was, humanly speaking, the means of speedily restoring an almost ruined and deserted tract of country to a flourishing condition.

And of those of Bhera and Sáhíwál.

Early in 1852, Mr. Ouseley was ordered to revise the Government demand in the Sáhíwál and Bhera Tahsíls. His instructions were to make the settlement for the years 1851-52, or until such time when the regular settlement demand should be determined; that as the year 1851 had expired, any increase in the Government demand was to be collected from 1852 only, whereas any remission that was considered necessary was to have retrospective effect. The Government demand throughout the district was by these operations reduced from Rs. 3,12,492 to Rs 2,67,455; this demand was collected without difficulty until the regular settlement assessment was determined, and when that assessment was determined, it was found that so far from a reduction on the summary settlement demand being necessary, an increase on it could be taken.

The results of the three summary settlements are shown in the following table:— CHAP. III-C. Land Revenue. Result of summary settlement, cis-Jhelum.

No.	Tahsil.	*Jama* of 1st summary settlement.	*Jama* of 2nd summary settlement.	*Jama* of 3rd summary settlement.	Decrease.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	
1	Bhera ..	1,25,164	1,14,941	1,07,579	17,585	The revenue of the Khusháb and Farúka *talúkas* transferred to Shahpur from the districts of Leiah and Jhang in the years 1853 and 1854 and added to the Sáhíwál Tahsíl have been excluded, so as not to disturb the comparison.
2	Sáhíwál ...	1,18,350	99,945	96,138	22,212	
3	Kálowál ...	98,978	75,617	63,738	35,240	
	Total ..	3,42,492	2,90,503	2,67,455	75,037	

The Mitha Tiwána, Núrpur and Sún *talukás*, as before explained, formed part of the *jágír* of Hari Singh, Nalwa. After the death of this leader, the two former were transferred in farm to Malik Fatteh Khán, Tiwána, and were held by him, with but few interruptions, till his death in 1848. At the same time, the Sún *talúka* was for a year or two given in farm to Rája Guláb Singh, who at this time held the contract for the greater part of the district, and afterwards transferred in *jágír* to Sardár Gurmukh Singh, Lámba. The Khabakki and Katha *talúkás* were for many years the *jágír* of Hari Singh, Mazbi, from whom they passed to Mahárája Kharak Singh, the former in 1822 and the latter in 1825. On Kharak Singh's elevation to the throne they were given to Sardár Shamsher Singh, Sindhánwália, as part of his *jágír*, and so remained till annexation. The *talúkás* of Ahmadábád and Núrpur Sethi went through many hands; among others, Rája Guláb Singh held the contract of the former for ten years from 1833 to 1843, and from 1844 to 1846 it formed part of Rája Híra Singh's *jágír*, while the latter for nineteen years, *viz.*, from 1818 to 1837, constituted the *jágír* of Sardár Rám Singh, Billi, a native of Bhágpur in the Mánjha. The trans-Jhelum tracts during Sikh rule

The management in all cases was identical; the *jagírdárs* being foreigners seldom resided on the spot, hence everything was left to the resident manager or *kárdár*, and as his tenure of office was often very precarious, he generally extorted as much from the *zamíndárs* as he could. The collections were made by that most iniquitous of systems, appraisement of the standing crop, or *tip* as it used to be called, by which the heaviest share of the common burden was nearly always made to fall on the shoulders least fitted Sikh revenue administration, trans-Jhelum.

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Sikh revenue administration, trans-Jhelum.

to bear it, because, forsooth, the owners were unable to bribe the *kárdár* or his underlings into making a favourable estimate of the probable outturn of their fields, as their richer brethern did. *Batái*, a far fairer mode of collection, was only resorted to in favour of individuals whom the *kárdár* wished to humour, or in respect of lands of which some portion of the State or *jágírdár's* share of the produce had been temporarily alienated as a concession to the leading members of the agricultural community.

First summary settlement, trans-Jhelum.

The first summary settlement of this trans-Jhelum tract was made by Mr. L. Bowring and, seeing what insufficient and unreliable data he had to work with, the rapidity with which the assessments had to be made, and how obviously it was the interest of the *jágírdárs*, whose income would be affected by the arrangements made, to mislead, it is rather a matter of surprise that the first settlements worked so well, than that considerable inequalities in the assessments were subsequently discovered. Other causes also combined to render revision necessary before long; and this was accordingly affected in 1852 by Major C. Browne for the *talúkás* afterwards received from Jhelum; and in the following year by Mr. David Simpson for those which then formed part of the Leiah District. The result of these revisions was a considerable reduction in the assessments of the hill *talúkás*, but more especially in regard to the *jamás* of the villages lying along the north of the Sún valley. The assessment of the Mitha *talúka* was also somewhat reduced, while that of Núrpur was raised by nearly 30 per cent.

Second summary settlement, trans-Jhelum.

This second summary settlement worked tolerably well; but still it was known that the assessment of the Salt Range villages was somewhat oppressive, and from time to time relief was given in the most glaring cases. This settlement was ostensibly made for two years only, but soon after this term had expired, the mutinies broke out; and before the finances of the country had recovered themselves sufficiently to allow of measures entailing extraordinary expenditure being undertaken, the Leiah District was broken up, which led to further delay, and thus it was that no steps were taken for some time to place the assessment and the rights of property on a sound basis. It must not, however, be omitted from mention that Mr. Parsons in 1860 revised the Government demand in the Núrpur *talúka*; the result was a slight reduction; but a more important change was made in allowing the proprietary body in each village to

which had been in force up to that time, by which the Tiwána Maliks had alone been responsible for the payments of the whole *talúka*.

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Regular settlement, 1854 56.

In 1854 regular settlement operations were commenced in the Shahpur District as then constituted (see Chapter II) under Mr. Richard Temple, who was presently succeeded by Mr. Gore Ouseley. By 1860 Mr. Ouseley had completed the assessment of the Bhera, Kálowál and Sáhíwál tahsils; he was succeeded by Captain (now Sir W. G.) Davies, who assessed the tracts received from Leiah and Jhelum and completed the whole settlement in 1866.

Results of regular settlement, cis-Jhelum.

The following table shows figures for the results of the regular settlement cis-Jhelum, in continuation of the information contained in the tabular statement on page 273:—

No.	Tahsil.	*Jama* of summary settlement.	*Jama* of regular settlement.	Increase.	Decrease.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	
1	Bhera ...	1,07,579	1,04,658	...	2,921	Balancing these last two columns gives an increase of Rs. 3,386 The increase was caused chiefly by the formation of estates, the decrease was due to reduction of *jama* in existing villages.
2	Shahpur ...	96,138	1,02,120	5,682	...	
3	Kálowál ...	63,738	64,363	625	...	
	Total ..	2,67,455	2,71,141	6,307	2,921	

Results of regular settlement, trans-Jhelum.

The general fiscal results of the revision of the assessment of the trans-Jhelum tract made by Captain Davies in 1865 will be seen from the table given in the margin. Reduction was nominal, except in the Hill Circle, where, as before explained, the summary settlement *jamás* pressed very heavily in places, and the general character of the assessment in the Sún valley was decidedly oppressive; on the other hand the assessment in the Thal and Danda circles was a good deal raised At first sight it

No.	Circle.	No. of villages.	*Jama* of summary settlement.	*Jama* of revised settlement.	Increase.	Decrease.
			Rs.	Rs.	Rs.	Rs.
1	Hill	32	44,920	40,705	..	4,215
2	Muhár	13	26,558	26,200		358
3	Danda	13	21,676	21,770	94	...
4	Thal ..	23	10,527	9,630	...	897
5	River ...	3	2,620	2,450	...	170
	Total	84	1,06,301	1,00,755	94	5,640

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would appear that there had been a considerale reduction in the *tirni* of the Thal; but in reality the tax was raised, for thirty *rakhs* containing an area of 220,000 acres had been marked off.

Fiscal results of the regular settlement.

The figures in the margin show the general fiscal* results of the regular settlement, following the divisions of the district as finally adjusted. The punctuality with which this demand was paid is seen from the fact that in no year did the balance at the end of the financial year exceed 5 per cent. of the demand and only in two years, *viz.*, 1868-69 and 1887-88, did it exceed 3 per cent. At the end of the agricultural year, however, *i.e.*, in September, after the completion of the *rabi* collections, the balance was sometimes larger; thus in 1882 after a series of bad years, and again in 1887 after the failure of the *rabi* harvest, the balance in September exceeded Rs. 30,000, or say 8 per cent. of a year's demand. This was due to time being given the revenue-payers, and on the whole it may be said that during the currency of the regular settlement there were few suspensions and practically no remissions, and that the assessment was on the whole realised with ease.

No.	Tahsil.	Summary settlement *jama*.	Revised settlement *jama*.	Increase.	Decrease.
		Rs.	Rs	Rs.	Rs.
1	Bhera ...	1,29,879	1,23,689	...	6,190
2	Shahpur	1,09,215	1,10,917	1,702	...
3	Khushâb	1,49,143	1,41,906	...	7,237
	Total	3,88,237	3,76,512	1,702	13,427

Note.—The real decrease after deducting the increase of Rs. 1,702 is Rs. 11,725 which falls at about 3 per cent. on the summary settlement *jama*; but this does not take into account the income from *rakhs* (about Rs. 23,000), which for the first time were created during this settlement.

Revision of settlement, 1887—94.

The revision of the first regular settlement of the district was begun in 1887 and completed in 1894, the operations throughout being conducted by Mr. J. Wilson, the Deputy Commissioner of the district. A detailed account of the principles and procedure followed is contained in the printed assessment and settlement reports. The instructions, briefly stated, were to make the estimated value of half the net produce of each estate the maximum for the Government demand, taking as a principal guide the rents paid in money or in kind on an average of years by an ordinary tenant-at-will, care being taken not to tax unfairly the capital invested in improvements, and full allowance being made for all circumstances directly or

* *i.e.* revenue paid into the treasury: assigned revenue is left out of account.

indirectly bearing on the profits and rents of the landowners. In order to break the suddenness of the enhancement in many villages a portion of the increase was deferred for a few years, so that the initial enhancement falls short of the final de and as announced at settlement For the whole district the statistics were as follows :—

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TAHSIL.	TOTAL FIXED ASSESSMENT IN RUPEES INCLUDING ASSIGNED REVENUE			Actual assessment of 1893-94.
	Of regular settlement.	Of last year before revision.	Final revised assessment.	
	Rs.	Rs.	Rs.	Rs.
Bhera	1,31,311	1,44,660	2,55,119	2,22,614
Shahpur	1,13,180	1,34,988	1,94,5[illegible]3	1,77,025
Khusháb	1,44,954	1,52,315	1,95,242	1,94,413
Total ...	3,89,445	4,31,963	6,44,864	5,94,052

In addition to the fixed assessment, a portion of the land-revenue on the canals was imposed in the form of a rate fluctuating with the matured area, at the rate of 8 annas per matured acre, which was called "water-advantage rate," and calculated to bring in Rs. 33,200 per annum. The total demand, as sanctioned, was 74 per cent. in excess of that imposed at regular settlement; the assessment due in the first year after revision (including Rs. 3[illegible],200 water-advantage rate) was 45 per cent. more than that due in the last year before revision. Mr. Wilson was able to justify his assessments by the following considerations among others :—

(a) The pitch of the assessment at regular settlement was over Re. 1-4-0 per acre, and at second settlement was less than Re. 1-0-0.

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Revision of settlement, 1887—94.

(b) At regular settlement the demand was equivalent to $1\frac{1}{3}$ maunds of wheat per acre; and at second settlement to $\frac{2}{3}$ maund only.

(c) Measured in gold, the incidence was £ 0-2-7 at regular settlement, and £ 0-1-3 only at second settlement.

That is to say the rise in demand was considerably less than the increase in wealth due to extensions of cultivation and rise in prices, especially gold-prices. All the same, it was felt in the irrigated circles that the new assessment was very full, and in consequence the demand actually imposed was allowed to remain in defect of the final sanctioned demand to the extent shown in the margin. The ultimate result of the settlement was to absorb about one-seventh of the gross grain produce and 39 per cent. of the landowner's net profits.

		Rs.
Bhera	..	14,530
Shahpur	.	3,200

Working of the second regular settlement.

The assessments were confirmed for a period of twenty years from the dates on which they were respectively introduced. They were, therefore, due to expire as follows:—

Tahsil.	Assessment circle.	Harvest from which the re-assessment came into force.	Harvest with which period of settlement was due to expire.
Bhera	Chenab ...	*Kharif* 1889 ...	*Rabi* 1909.
	Bár and Jhelum ...	*Rabi* 1891 ...	*Kharif* 1910.
Shahpur	Whole tahsíl ...	*Kharif* 1892 ...	*Rabi* 1912.
Khusháb ...	Plains portion ...	*Rabi* 1893 .	*Kharif* 1912.
	Hill	*Kharif* 1891	*Rabi* 1911.

It was recognised from the outset that in so insecure a district the system of collection must be thoroughly elastic, and

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suspensions or remissions were freely given when circumstances so required. This fact, combined with the unassailable fairness of Mr. Wilson's distribution of the demand over villages, enabled the settlement to be worked without any difficulty. The details of collections will be found in Table 39 the figurers do not include Rs. 49,654 of assigned revenue.

Cancellation of the settlement on the introduction of the perennial canal.

When perennial irrigation from the Lower Jhelum Canal was introduced into the Bár, the light *báráni* assessments in force were clearly inadequate. The fact that the settlement still had several years to run presented no difficulty, as the villagers were only too glad to agree to its cancellation on condition that they got canal water at once. Hence in 1902 it was ordered that the Colonization Officer should apply summary fluctuating rates, not only to the newly colonized Crown lands which had not previously been assessed but also to all proprietary estates whose owners had formally agreed to the cancellation of the fixed assessment. The Summary fluctuating rates imposed were known as "consolidated" rates, and included land-revenue and cesses in the proportion of 4 to 1 and in the case of Crown lands, *málikána* also, at a quarter of the land revenue.* These rates were as shown in the margin in the first instance, but in 1906 the abolition of the famine and patwari cesses caused a reduction of 1 anna $2\frac{18}{25}$ pies in the rupee. The previous fixed assessment in these circles had been Rs. 86,?80, out of which Rs. 56,058 still remained, and Rs. 30,122 was cancelled, and replaced by the consolidated rates. The fluctuating assessments shown in the margin do not represent the full demand recoverable from the consolidated rates, as many estates were in 1905-06 still

Circle.		Rate per acres— (a) In Crown lands (b) Proprietary lands.		Fixed assessment remaining due in 1905-06.	Fluctuating assessment in 1905-06.
		Cháhi and *báráni*	*Nahri.*		
		Rs. A. P.	Rs. A. P	Rs.	Rs.
Bhera Bár	(a)	1 0 0	1 8 0	8,429	1,02,120
	(b)	1 0 0	1 4 0		
Bhera Chenab	(b)	0 12 0	1 0 0 and 0 14 0	?0,237	9,023
Sargodha Bár Utla.	(a)	1 0 0	1 8 0	2,310	51,931
	(b)	0 12 0	1 2 0		
Sargodha Bár Hethla	(a)	0 12 0	1 2 0	441	29,035
	(b)	0 12 0	1 2 0		
Shahpur Ara	(b)	0 12 0	1 0 0 and 0 14 0	4,641	33,460

* *E.g.* in the Bhera Bár, where the rate was Re. 1-8-0 per acre on Crown land and Re. 1-4-0 in proprietary villages, Re. 1 represented land revenue, and Re. 0-4-0 cesses: the balance on Crown land was *málikána*.

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enjoying the concession of four free harvests granted to colonists.

In 1907 Mr. Hailey submitted a report proposing new rates, and recommended that these should be introduced from *kharíf* 1911 and should remain in force during the currency of the settlement which would then be made for the remainder of the district. The Punjab Government however was unwilling to accept his proposals, which were based on a series of years in which the Colony had not reached its full development, and which had been particularly unfortunate in the matter of calamities of seasons. Mr. Rudkin, Assistant Colonization Officer, was ordered to collect more up-to-date statistics, and meanwhile the rates were left unaltered.

The regular Settlement of the Lower Jhelum Canal area.

Mr. Rudkin submitted his report in 1911, and the new rates were introduced from *Rabi* 1912 for a period of 10 years. The sanctioned revenue-rates are shown below: they do not include *málikána* or cesses :—

Circle.	*Nahri.*	*Jhálári.*	*Cháhi.*	*Báráni.*
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bhera Bár	2 14 0*	2 0 0	1 4 0	1 0 0
Bhera Chenab... ...	1 6 0	1 0 0	1 4 0	1 0 0
Bhera Jhelum	2 0 0	1 6 0	1 4 0	1 0 0
Sargodha Bár Utla	3 0 0*	2 0 0	1 4 0	1 0 0
Sargodha Bár Hethla ...	1 14 0	1 6 0	1 4 0	1 0 0
Shahpur Ara Jhelum	1 8 0	1 4 0	1 2 0	0 12 0

* These rates were reduced by 4 annas for a period of 4 years.

It was estimated that the effect of reassessment would be to raise the land-revenue demand from Rs. 4,90,000 (the sum brought out by applying the old rates to the matured area for 1909-10) to nearly Rs. 13,50,000, a rise of 174 per cent. In addition to this, cesses were to be paid at $13\frac{1}{3}$ per cent., and *málikána* at the nominal rate of 2 annas per acre allotted for horse-breeding colonists and 12 or 6 annas per *killa* allotted for

other tenants, according as the *nahri* revenue rate was as much as Rs. 2 per acre or less.

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Re-assessment of the Chenab riverain.

Perennial irrigation in the Chenab Circle only extended as far as the flood embankment, and a considerable area on the south side was not included in the settlement of the Colony area. It was found however that the abandonment of wells, migration of tenants to the canal, loss of floods, and, above all, spread of alkali had so weakened the circle that the fixed assessment had become burdensome. A fluctuating system was therefore introduced in this area also by Mr. Rudkin, with effect from *kharif* 1910. The average sanctioned rates were :—

	Rs.	A.	P.	
Cháhi	1	8	0	per acre matured.
Sailáb	1	8	0	per acre matured according to class of crop.
	1	0	0	
	0	8	0	
Báráni	1	0	0	

These rates were raised or lowered according to the quality of the village.

The Third Revised Settlement in the remaining circles.

Throughout the remaining portions of the district, that is to say, the River Circles, the Khushàb uplands, and such scattered fragments of the Bár and Ara as had not obtained perennial irrigation, the settlement was due to expire between *kharíf* 1910 and *kharíf* 1912. The work of revising the assessment was begun by Mr. Leigh in October 1911, who submitted an assessment report for the *cis*-Jhelum tract in August 1913, and one for the Khusháb Tahsíl in November 1914. In the *cis*-Jhelum tract, the passing of orders was delayed for two years owing to the pendency of negotiations between Government and the owners of Private Canals, with a view to replacing the inundation system by a *kharíf* distributary of the Lower Jhelum Canal. These negotiations came to nothing, and the new assessments came into force from the *rabi* of 1915 in Khusháb and the *rabi* of 1916 in the *cis*-Jhelum. Definite orders as to the period of settlement have not been passed, but it is probable that a 20-year period will be sanctioned. The general effect of the re-assessment was to raise the total demand in Bhera, Shahpur (including a small corner of Sargodha), and Khusháb by 30, 28, and 32 per cent. respectively. This was accomplished mainly by doubling the water-advantage-rate on the inundation canals, and by raising the *báráni* and *banjar* rates in the Thal.

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The Third Revised Settlement in the remaining circles.

The pitch of the revenue rates in each assessment circle according to the new and the old settlements can be judged from the following table :—

SOIL.	BHERA. Second Settlement.	BHERA. Third Settlement.	SHAHPUR-SARGODHA. Second Settlement.	SHAHPUR-SARGODHA. Third Settlement.	KHUSHAB-JHELUM. Second Settlement.	KHUSHAB-JHELUM. Third Settlement.	KHUSHAB-THAL. Second Settlement.	KHUSHAB-THAL. Third Settlement.	KHUSHAB-MOHAR. Second Settlement.	KHUSHAB-MOHAR. Third Settlement.	KHUSHAB-HILL. Second Settlement.	KHUSHAB-HILL. Third Settlement.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
áhi ...	2 6 0	2 6 0	1 7 0	1 10 0	1 14 0	1 14 0	0 4 0	0 5 0	1 0 0	0 14 0	3 10 0	4 0 0
áhi-nahri ...	2 6 0	2 0 0	1 7 0	1 6 0	...	...	...	...	...	...	...	...
ahri-ábi ...	0 8 0	0 10 0	0 6 0	0 8 0	0 6 0	0 6 0	...	...	1 0 0	0 14 0	3 10 0	3 8 0
iláb ...	2 0 0	2 1 0	1 9 0	1 12 0	1 12 0	1 14 0	...	...	1 0 0	0 14 0	...	...
ráni I ...	...	...	...	...	...	...	...	...	1 0 0	0 14 0	1 9 0	1 9 0
ráni II ...	...	...	...	...	...	...	...	...	0 9 0	0 9 0	1 0 0	1 2 0
ráni III ...	0 6 0	0 10 0	0 6 0	0 8 0	0 6 0	0 6 0	0 4 0	0 5 0	0 5 0	0 5 0	0 9 0	0 8 0
anjar* ...	...	0 2 0	...	0 2 0	...	4 0 0	2 0 0	2 8 0	...	4 0 0	...	
ater advantage† ...	0 8 0	1 0 0	0 8 0	1 0 0	0 8 0	1 0 0	...	...	...	...	.	...

* In Khusháb, the *banjar* rates are per 100 acres.

† Water-advantage-rates are per acre matured *nahri*.

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The Third Revised Settlement in the remaining circles.

The amount of the enhancement in the fixed and fluctuating demands for each circle is as follows:—

CIRCLE.	DEMAND AT CLOSE OF 2ND SETTLEMENT.			FINAL SANCTIONED DEMAND FOR 3RD SETTLEMENT.			Increase per cent.
	Fixed.	Fluctuating.	Total.	Fixed.	Fluctuating.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bhera-Jhelum ...	97,659	9,723	1,07,382	1,20,000	20,000	1,40,000	30
Shahpur-Sargodha-Jhelum.	1,59,951	27,383	1,87,334	1,80,000	60,000	2,40,000	28
Khusháb-Jhelum ...	62,991	1,009	64,000	73,000	2,000	75,000	17
Khusháb-Thal ...	11,830	...	11,830	36,000	...	36,000	204
Khusháb-Mohar ...	69,206	...	69,206	88,000	...	88,000	27
Khusháb-Hill ...	53,487	...	53,487	64,000	...	64,000	19
Total Khusháb	1,97,514	1,009	1,98,523	2,61,000	2,000	2,63,000	32
Total all tahsíls ...	4,55,124	38,115	4,93,239	5,61,000	82,000	6,43,000	30

The full assessment will not be imposed at once: in the three Jhelum circles and the Hill circles certificates of exemption have been granted to all new wells, and in the Thal Rs. 15,000 have been deferred for the present, of which Rs. 7,000 will be imposed after 5 years, and the remaining Rs. 8,000 after 10 years. In a few other villages elsewhere, some of the demand has been deferred for a time on account of the sudden increase.

Pitch of the new assessment.

It is estimated that the new demand, when fully imposed, will absorb the proportions of gross grain produce and half net-assets shown in the margin. If allowance is made for the income derived from cattle and miscellaneous products of the waste, the figures would be materially lowered. Thus in Khusháb Tahsíl, if the income from cattle in the Thal and Mohar circles only be added in, the assessment will only absorb 55 per cent. of the half net-assets. It has already been shown that Mr. Wilson's assessment

TAHSIL.	PERCENTAGE ON	
	Gross produce of crops.	Half net-assets.
Bhera ...	10	56
Shahpur ...	10	58
Khusháb ...	11	64

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Land Revenue.

Pitch of the new assessment.

was designed to secure about one-seventh of the gross produce and 78 per cent. of the half net-assests, and that he was able to prove that the pitch of the regular settlement had been considerably higher. So it is clear that, as cultivation has expanded and prices have risen, the assessments have been progressively lenient. This has been frankly admitted by the revenue-payers of Khusháb, and by all those inBhera and Shahpur who are not mainly dependent upon the canal. The doubling of the water-advantage-rate has called forth a good deal of protest, but it is fully justified by the fact that on the canals the increase of expenses and the difficulty of finding tenants are very much less than on the well-lands, and generally speaking canal holdings are much larger, and the benefit from improved prices is proportionately greater.

Comparison of present and past settlements.

It is not possible to institute any exact comparison between the total assessment of the district now and that of previous settlements, since the advent of the canal has introduced an entirely new factor; but it is worth remarking that whereas in 1863 the incidence of the revenue was over Re. 1-4-0 per acre of cultivation it is now not quite Re. 1-12-0, an increase by no means proportionate to the increase in irrigated area or the rise in prices. In Khusháb Tahsíl, where the only important change has been in the methods and area of cultivation, it is possible to make a more exact comparison :—

	Rs.
Average collections under Sikh administration ...	2,00,000
Demand at expiry of Summary settlements ...	1,52,500
Demand at beginniug of First Regular Settlement ..	1,44,954
Demand at end of First Regular Settlement ...	1,52,315
Demand at beginning of Second Regular Settlement	1,95,016
Demand at end of Second Regular Settlement ..	1,98,474
Demand at beginning of Third Regular Settlement	2,40,252
Final Demand as sanctioned for Third Regular Settlement.	2,63,000

Assigned revenue.

The revenue assigned to *jágírdárs* and *máfidárs* now amounts to Rs. 40,625, out of the final sanctioned demand, as against Rs. 41,145 in 1893. These sums do not include the *ináms* paid to *zaildárs* and *inámkhors*, which amount to Rs. 12,159. The bluk of the assignments are made in perpetuity, either to Tiwána Maliks, Baloch Sardárs, etc., for services rendered at the time of the Mutiny (as described in Chapter I, Section C), or to religious institutions, such as the Koh Kirána shrine, and the Thán of Kaya Nath in Bhera. A few villages are held in *jágír* by

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Tiwána Maliks for one or more lives, and the remaining assignments are for the term of settlement in favour of lesser religious institutions.

Instalments.

The demand for the *kharif* harvest has to be paid in by January 15th, and that for the *rabi* harvest by July 15th in the hills and by July 1st elsewhere. An arrangement has recently been adopted whereby each village is required to pay in its revenue on a fixed date, and only as many estates are assigned to one date as can be easily dealt with by the staff. This will greatly diminish the difficulties of headmen, provided they are backed up by the Revenue authorities in their endeavours to secure prompt payment by the land-owners.

Suspensions and remission of revenue.

In the area under fluctuating assessment, it is never necessary to suspend the current demand: and generally speaking in the Jhelum Circles of Bhera, Shahpur and Khusháb, the fact that the water-advantage-rate fluctuates with the matured crop provides a sufficient degree of elasticity. There are however a few villages in these circles classed, for special reasons, as insecure. In the Hill circle of Khusháb the rainfall is fairly constant, and it is only in the Vanhar tract that suspensions are likely to be required occasionally. The Thal and Mohar circles, on the other hand, are as insecure as any tract could be, and it is not infrequently necessary to suspend the entire demand for the harvest. In these two circles, the pitch of the assessment is so low that it is always easy to recover the suspended sums as soon as a good harvest ensues, unless indeed the drought has been so prolonged that the resources of the peasantry are completely exhausted. A succession of bad harvests between 1898 and 1903 made it necessary to remit considerable sums for this reason.

Remissions of course have to be given for unforeseen calamities such as hailstorms, boll-worm, or plague. Thus over Rs. 20,000 were remitted in the Bhera-Jhelum circle in the *rabi* of 1904 on account of plague, and over Rs. 10,000 in Shahpur were suspended for the same reason, and remitted the next year. In the south of the district remissions to the extent of some Rs. 18,000 were allowed on account of damage by hail in 1914-15 and liberal remissions were made in 1911-12 on the cotton crop, which suffered much from boll-worm. It is specially important that full allowance should be made for such calamities, as in the ordinary course no allowance is made for crops which are not up to standard, except when there is total failure, or where there are admitted to be defects in the water-supply.

The record-of-rights.

At Second Settlement Mr. Wilson prepared a very careful and accurate record-of-rights for the whole district. The field

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maps were prepared in the plains on the square system, and in the hills by triangulation, all the work being done by *patwárís.* It was of course inevitable that in a difficult country like the Thal or the river-beds, these maps should be to some extent distorted, but on the whole the results were surprisingly good. The *jamabandís* and other parts of the standing record were also prepared with great care, and were admitted on all hands to be very good.

Rectification and *killabandi.*

When perennial irrigation was introduced, it was decided that all would-be irrigators must as an initial measure lay out their fields on a system of squares of 40 *karams* each way. These squares were called "*Killas*," owing to the fact that their corners were marked by pegs, and 25 *killas* made a "*murabba*" or "square" of 200 *karams* each way, the corners of each *murabba* being marked by a stone pillar. A single line of base squares was laid down for the whole area, and these were extended by *patwárís*; a certain amount of error resulted, but in each "square" the whole error was thrown into two lines of *killas*, so that each contained sixteen perfect *killas* and nine slightly imperfect. It was of course necessary to prepare special files to show exactly to what extent the boundaries of holdings had been adjusted and to ensure that each man obtained his fair share of the land; and in a similar manner it was necessary to adjust the boundaries of estates so as to make them follow as far as possible the lines of the square system. These processes were known as "rectification" and resulted in a very great simplification of the maps and records; moreover they greatly facilitated the distribution of water and the checking of crops, the calculation of demands, and the settlement of boundary disputes. A further refinement is the sub-division of *killas* into *kiárís* or plots, for the greater economy of canal water.

The effects of rectification were embodied in a revised record-of-rights prepared by Mr. Hailey for all estates into which perennial irrigation was introduced.

Revision of the record in Khusháb.

In the Khusháb Tahsíl a special revision of the record-of-rights in 1912-13 was sanctioned. In the river bed and the whole of the Thal new field maps were prepared by measurements based on traverses fixed by the Riverain Detachment of the Survey of India. All down the Jhelum, on both banks of the river, base squares were laid down and marked with stone pillars in such a way that the whole river-bed was mapped on a co-ordinated series of squares: intermediate survey marks were also fixed, and the *patwárís* made their measurements from these on mapping sheets on which the location of these marks had been accurately plotted in the Survey Office. A similar system was

followed in the Thal, which circle has now been mapped on a single system of co-ordinated squares. The great advantage of this arrangement is that it is perfectly easy to see whether the boundary between two villages is shewn identically in the maps of each, and much more easy than it ever was before to lay out an obliterated boundary so as to satisfy the owners on either side. It is hoped that there will be fewer boundary disputes in the future than there have been in the past.

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Land Revenue.
Revision of the record in Khusháb.

In the remainder of the tahsíl, *i.e.*, in the upland portions of the Jhelum Circle, the Mohar, and the Hills, the new maps were made simply by showing alterations on a tracing of the settlement map. The results were only moderately satisfactory, but it is hoped that no serious difficulties will ensue. The *jamabandís* and other portions of the standing record were all brought up to date; special attention was paid to the complicated water-rights of the Hill and Mohar circles, and the measure of rights in village waste in the Thal.

Correction of records in the cis-Jhelum riverain.

In the Bhera and Shahpur Tahsíls it was decided before settlement operations began that a revision of the record was unnecessary, and that a specially careful compilation of quadrennial *jamabandis*, accompanied by correction of the field maps, was sufficient. Remeasurement was therefore confined to the river-bed, and elsewhere the same system was followed as in the Hill and Mohar. Here also the results are only moderately satisfactory.

Royalty.

On the private canals of Bhera and Shahpur Tahsíls, a fluctuating royalty rate is collected from the canal owners as a water-due under section 8 of the Minor Canals Act. This royalty rate was originally imposed at second settlement, at the rate of 4 annas per acre irrigated. At the third settlement the rate on crops was raised to 12 annas an acre matured, the rate on grass being left at 4 annas per acre irrigated. The canal-owners have applied for reconsideration of these orders, but it is admitted that the rates imposed are well within the margin of 25 per cent on the net profits from the water, which is the maximum payable according to the Act. The total receipts under this head, if the existing orders are maintained, will be about Rs. 24,000 per annum.

Section D.—Miscellaneous Revenue.

Miscellaneous Revenue.

Revenue and taxation.

The revenue collections of recent years are given in Tables 39 (Fixed Land Revenue), 40 (Fluctuating Land Revenue and Miscellaneous Revenue), 41 (Excise), 42 (Income Tax) and 44 (General). In 1870 the grossrevenue collections totalled about $4\frac{3}{4}$ lakhs of rupees; in 1897 they had risen to $7\frac{3}{4}$ lakhs; by 1910

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they had risen to nearly $14\frac{3}{4}$ lakhs, exclusive of over $21\frac{1}{2}$ lakhs of canal direct revenue. Since then there has been still further development. The land revenue demand rose in 1913-14 to nearly 21 lakhs * and when the new assessments are fully introduced in the area under fixed assessment, another $1\frac{1}{2}$ lakhs will be added. By 1917 the gross revenue will probably amount to about $26\frac{1}{2}$ lakhs of rupees, exclusive of some 24 lakhs of direct canal revenue, so that in 20 years it will have been more than trebled, and if canal revenue is counted, it will have been more than sextupled.

Excise.

The Excise administration is supervised by the Assistant Commissioner, working under the control of the Deputy Commissioner, with an Inspector in general charge of the whole district, and a Sub-Inspector holding special charge of two tahsíls. The subordinate staff consists of a Muharrir and three peons. There are no distilleries in the district; country spirit is obtained from the Ráwalpindi distillery. There is one shop at Sargodha licensed to retail first class foreign liquor; each tahsíl head-quarters has a shop licensed to retail other foreign liquor; 15 shops are licensed to retail country spirit; 13 to retail opium; and 10 to retail drugs. Travellers can also obtain liquid refreshment at Khusháb Railway Station. Three druggists are licensed to sell cocaine for medical purposes, and 16 qualified medical men have been granted practitioners' licenses for this drug. 14 druggists are licensed to retail arsenic and other poisons for medical purposes, and 7 to retail denatured methylated spirit.

The income from excise averaged Rs. 22,014 for the 5 years previous to 1897: of this sum Rs. 11,865 were derived from liquor and Rs. 9,749 from drugs and opium. By 1910, the figures had risen to Rs. 44,249 (liquors Rs. 30,387; opium, Rs. 10,010; other drugs, Rs. 3,852). In 1911 new rules were brought into force, and the estimated revenue for 1915 is Rs. 47,696 (liquors, Rs 30,891; opium, Rs. 12,000; other drugs, Rs. 4,805). The license for first class foreign liquors is sold for a fee fixed according to the average income from sales; all other licenses are sold by auction, subject to the payment of a fixed minimum, and to the approval of the highest bidder by the Collector.

The annual consumptions amount to about 1,200 gallons of foreign spirit, 200 gallons of beer, 5,000 gallons of country spirit (London proof), 600 seers of opium, 400 of *charas*, and 2,500 of *bhang*. The advent of Sikh colonists from the Central Punjab has led to an increased consumption of strong drinks; in 1914 a

* The drop of 4 lakhs in 1914-15 was due to remissions on the cotton crop in connection with the war.

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Miscellaneous Revenue.

Excise.

gang of smugglers in Bhera started a lucrative illicit trade in opium with Bengal and Burma. *Charas* appears to be declining in popularity; cocaine has not established itself as a vice. There is a certain amount of illicit distillation in Sargodha Tahsíl, but three cases have recently been successfully prosecuted, and the recently strengthened staff has effected a marked improvement in the administration: there is however scope for still further additions to the supervising establishment.

Income-tax.

Income-tax is paid by five companies and 1,001 other firms and individuals in the district; the total demand is Rs. 39,867; in 1897 it was Rs. 15,926. When it is remembered that the taxation on account of land revenue and water rates and the value of proprietary rights have both increased by more than 500 per cent. in the same period, it would seem that income-tax assessments are relatively low. No less than 433 persons are assessed in the lowest grade at Rs. 20 each. The details by tahsíls are these:—

Tahsil.	No. of Assessees.		Total demand.	Maximum paid by a single person.	No. of persons in lowest grade.
	Companies.	Others.			
			Rs.	Rs.	
Bhera ...	2	330	11,816	350	142
Shahpur ...	1	261	11,077	397	99
Sargodha ...	2	240	10,787	590	121
Khusháb	...	170	6,187	412	71

It must, however, be remembered that since 1897 the taxable minimum income has been raised from Rs. 500 to 1,000 per annum.

Incidence of revenue and taxation.

The total collections of revenue (including water rates) and other Government tax in the year 1910-11 were Rs 37,38,677, and the population in March 1911 was 687,366, so the incidence was nearly Rs. 5-8-0 per head. It is difficult to say what the incidence is now: on the one hand, the revenue and taxes have been raised to nearly Rs. 48,00,000, and the population has been reduced by 38,400, owing to the cession of territory to Gujrát District: but, on the other hand, public health has been on the whole good since 1911, and probably the rate of increase has been over 1·5 per cent. per annum. The present population is probably not less than 7,00,000, so the incidence is about Rs. 6-14-0, exclusive of local rates, cesses, and municipal taxes. If these last be also reckoned in, the incidence is something like Rs. 7-8-0 per head of population. And we have seen that one worker supports, on an average, nearly two dependants, so it would seem that each worker

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Local and Municipal Government.

pays about Rs. 20 a year in taxes, and rates of various kinds.

Section E.—Local and Municipal Government.

District Board.

The District Board consists of the chief executive officials and of the leading men of the district, and is presided over by the Deputy Commissioner as chairman. There are in all 54 members, of whom 13 are appointed by official designation, 7 are distinguished *raises* appointed by name, and 34 are nominated to represent various local units. A list of present members is printed in the Appendix. The Board exercises control over the construction and maintenance of roads, the establishment and management of hospitals, dispensaries, *sarāis*, rest-houses and schools ; the planting and preservation of trees ; the management of cattle-pounds and public ferries ; and other measures for the promotion of the health, comfort and convenience of the public. It has a good Board Office building in Sargodha where it meets about 11 times a year and where its staff works under the control of the Deputy Commissioner. Table No. 45 shows the income and expenditure of the District Board from 1901 to 1911. The gross income is now treble what it was thirteen years ago, partly owing to the increase in the land revenue and consequently in the local rate, partly owing to ferries, cattle-pounds and other properties having been made over to it for management by the Provincial Government, and partly owing to development of its own properties. Some idea of the extent to which the responsibilities and importance of the Board have increased may be formed by comparing the income and expenditure as they were in 1886 and 1896 and as they are now In each case the figures are the average for the preceding three years :—

—	1886.	1896.	1916.
	Rs.	Rs.	Rs.
Gross income	38,999	77,110	3,52,286
Income from Provincial rates	32,539	49,085	1,65,778
Total expenditure	33,004	85,229	3,39,614
Expended on education	7,000	18,000	74,150
" " medical relief	7,000	10,000	33,800
" " Public Works	9,500	20,000	1,78,000
" " minor Departments ...	3,900	11,000	21,700

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District Board.

But even these figures fail to represent the existing state of affairs. Expenditure on education (exclusive of buildings which is included under Public Works) had in 1914-15 risen to over Rs. 96,000, and since then the salaries of teachers have been raised, and the compulsory recurring expenditure on educational establishment alone will in future be over a lakh of rupees. In fact the Board is now so far committed to recurrent charges that it has practically no margin of income left for expenditure on new enterprises

Municipalities.

There are municipal committees in charge of the local administration of the towns of Bhera, Khusháb, Sáhíwál, Miáni, and Sargodha. The constitution of each and a list of the members will be found in Appendix I.-F. The population of the towns has been discussed in Chapter I.-C.

Bhera.

The town of Bhera lies in north latitude 32° 22′ and east longitude 72° 57′ and contains a population of 15,202 souls. It lies near the left bank of the Jhelum, 30 miles east of Shahpur. It is still the head-quarters of a tahsíl, and one of the largest and most imposing towns of the district, but it has to some extent been thrown into the shade by the rise of Sargodha and of Bhalwál, which will as soon as funds are available become the tahsíl head-quarters : Bhera will then be a sub-tahsíl, with a special Náib Tahsíldár in charge The municipality of Bhera was first constituted in 1867, and is of the second class, with 5 nominated and 10 elected members, and an elected president, at present the Tahsíldár. The average income, which at last settlement was Rs. 20,000 per annum, has now risen to Rs. 33,049, owing mainly to increases in the octroi rates. At one time the committee was notorious for its factiousness and pseudo-religious animosities, but lately there has been a marked improvement in this respect. The committee maintains several primary schools and the Dispensary, described in Chapter III ; they are also endeavouring to carry out an ambitious drainage scheme, both intra- and extra-mural, which has been existent in embryo for the past 20 years or so. It is to be hoped that it may be safely brought to birth in the near future, as the town has suffered very severely from plague and fever in the last decade, and the population has declined since settlement by 2,426 souls. There are two honorary magistrates and a bench of four magistrates in the town, described in Chapter III-A The inhabitants of Bhera are much addicted to employment in various Civil Services, and many of them have risen to high positions, both under Government and in Kashmír and other States

The town is surrounded by a wall, partly *kacha* and partly *pakka*, with eight gates, of which the Lahori Gate to the

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east and the Thánwála to the north are the principal. It is the best looking town in the district, being built of brick throughout. There are some ancient buildings with wonderful wood-carving. There are also some gardens outside the town, among which Thánwála garden, and one in which the tomb of Mírán Said Mahammadi is built, are specially worthy of notice. It has a *sarái*, detached tahsíl and thána, a dispensary, a female hospital, a veterinary hospital, a town hall and two high schools.

The early history of the town of Bhera is discussed at some length by General Cunningham in his "Ancient Geography of India," pages 155 to 159, and Archæological Survey Report, Volume XIV, pages 35 to 40. The original town stood on the right bank of the river, and in former days must have been a place of considerable note, for Bábar, in his autobiography, when speaking of his designs on Hindustán, talks of the countries of Bhera, Khusháb, etc., and again in describing Hindustán itself he defines the limits of the empire as extending from Bhera to Behár.* Some idea of its size may also be gained from the fact that it paid so large a sum as two lakhs of rupees to purchase its safety, when the troops under Bábar, disappointed of expected plunder in Bajaur, arrived before it in A. D. 1519. Soon after this, says tradition, the adjoining hill tribes descended and destroyed the city. The ruins of the old town still remain, and are known by the name of Jobnathnaggar. It is identified by General Cunningham as the capital of Sophites, or Sopheites, the contemporary of Alexander the Great.† The same author speaks of it as the refuge, and for some time the capital, of the Brahman kings of Kábul, expelled about the end of the 10th century by the Muhammadans.

The new town of Bhera was founded in A. D. 1540, during the reign of Sher Shah, near a spot where a holy man calling himself Pír Káya náth had for some time been established, and where his followers are still residing round the tomb of their spiritual father. The place appears rapidly to have attained to its former size and importance, as it is one of the few places mentioned by name in the description of the Lahore *Súba* given in the Aín-i-Akbari, from which we also learn that it was the centre of a *mahal* which paid a revenue of nearly five lakhs of rupees, and was one of the few spots in the whole empire where money was coined. After being plundered and laid waste by Núr-ud-dín, as mentioned before, the town was repopulated by

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*Erskine's Bábar, pages 255 and 310.

‡Archæological Report, 1863-64, page 42.

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the Chiefs of the Bhangi *misl*, to whose share it fell in the division of the territory acquired by the Sikhs. Its appearance has been greatly improved under British rule.

Bhera.

Bhera is a place of considerable though now somewhat stagnant trade, its position as the terminus of a branch of the railway making it an emporium for the trade of the country to the south. A large colony of Khojás and Piráchás, Muhammadan converts from Hinduism, are settled here, and carry on a traffic with Kábul and countries beyond it. Rice, *gur* and sugar are imported from the Jullundur Doáb; country cloth is exported to Kábul, Multán, Deraját and Sukkur. European cotton goods are brought from Amritsar and Karáchi. Henna dye is exported to the value of a lakh of rupees yearly. The town is also famous for ironsmiths and stone-cutters as well as wood-carvers; and excellent felt and soap are manufactured, the former being exported in large quantities. A more detailed notice of some of these industries will be found in Chapter II.

Khusháb.

The town of Khusháb lies in north latitude 32° 17′ 30″ and east longitude 72° 24′ 30″, and contains a population of 10,159 souls. It is situated on the right bank of the Jhelum on the Lahore and Deraját road, about eight miles from Shahpur. Seen from the opposite bank of the river the town is picturesque. Being quite on the edge of the river, it has several times been washed away by the stream. Year by year the river has encroached on the banks, so that a portion of the inhabitants are in turn driven out of their houses and obliged to build away from the river. The town is partly surrounded by a *kachha* wall with four gates, of which the Lahori to the east and the Kashmíri to the north are the principal. There are no data for giving, with any degree of exactness, the year of foundation of Khusháb. It is said by local tradition to have been built in A. D. 1503.* But it must have existed long before this, and is probably one of the oldest towns in this part of the Punjab, as it was a flourishing place in the time of Bábar, and is frequently mentioned by him in his memoirs. Indeed, from the manner in which it is mentioned, it is clear that the old town must have existed when Bábar's ancestor, Tamerlane, invaded Hindustán in A. D. 1398. The local tradition says that the founder of the town was Sikandar, son of Bahlol Khán, Lodhi, guided by the advice of Sayad Shah, Bokhári. Sikandar is supposed to have come to the Punjab, with a relative named Mír Pahlwán Khán, in the wake of Mír Chakar and Mír Jalál Khán, the Baloch invaders from

*This is the date according to the numerical values of the letters of the town's name, according to the "Abjad" method.

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Khusháb.

Mekrán, shortly after the retreat of Tamerlane. Amongst the most successful of the early rulers were Sardár Lál Khán and his son Jáfar Khan. Extensive improvements were carried out by Sher Shah Súri, who built the present Idgáh, and he is sometimes spoken of as the founder of the town. Very little, however, of the old town remains; for the last fifty years the river has been gradually cutting away its right bank at this spot, and with it have disappeared the gardens of the good Ahmadyár Khán, the fort built by Jafar Khán, Biloch, and nine-tenths of the older house. In Captain Davies' time, about 1865, a new town was laid out which, with its bazar thirty feet wide and more than half a mile in length, and its open streets, promises to surpass the former one. The Nawáb Ahmadyár Khán, mentioned above, was Governor of Khusháb, in Muhammad Shah's time, and his tomb, about a mile to the south-west of the new town, is still a place of pilgrimage.

Another shrine much visited by pilgrims from far and near is the "Badsháh Sáhib," or tomb of the descendants of Hazrat Pír Dastgír of Baghdád, which stands to the south of the town.

Khusháb carries on a large trade with Multán, Sukkur, Afghánistán, and the Deraját, sending down cotton, wool and *ghi* to the two former, and country cloth to the latter, receiving in exchange English piece-goods, spices, iron, copper, *etc.*, from Multán and Sukkur, dried fruits, madder, etc., from Afghánistán, and sugar and *gur* from Amritsar and the Jullundur Doáb. It is the great mart for the grain of the Salt Range. The principal manufacture is that of coarse cloth and cotton scarves (*lungís*), there being some 600 weaving establishments in the town. The manufacture of art pottery has been commenced. A more detailed notice of some of the industries of the town will be found in Chapter II.

The public buildings are a tahsíl, a thána, a school, a dispensary, a *sarai* with rooms for travellers, and town hall. At Khusháb is the largest ferry in the district, as from here roads branch to Dera Ismail Khan, Miánwáli, Bannu and Talagang through the Salt Range. A bridge of boats is maintained during the cold season. Khusháb is a changing station on the Sind-Ságar Branch of the North-Western Railway and has a considerable population of Railway employees.

The town, thanks to its high position, and lack of irrigation, is comparatively healthy, but for the past few years the river has gone across to the far bank, and the inhabitants have had

to go a mile or more for their drinking water. Expensive borings have however been made on the high bank, and a scheme for pumping water from a tube-well has been sanctioned, and will be carried out as soon as the financial situation becomes normal.

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Local and Municipal Government.

Khushâb.

The municipality was founded in 1867, and is of the second class; there are nine members of the committee, all nominated, the president now being Sardár Bahádur Khán, Baloch. The annual income, which at settlement averaged Rs. 9,829, is now Rs. 20,834.

Sáhíwál.

The town of Sáhíwál lies in north latitude 31° 58′ and east longitude 72° 22′ and contains a population of 7,658 souls. It was formerly the head-quarters of a fiscal sub-division; it is one of the chief commercial towns of the district. It is not well built, and is completely surrounded by a *kacha* wall with six gates, of which the Lahori to the east and the Kashmíri to the north are the principal. The town is badly situated on a raised piece of ground, around which the surface drainage of the country for many miles round collects. The heavy rains of 1892 caused a severe epidemic of fever and in that year the death-rate was 97 per thousand per annum. A drainage scheme is badly wanted. It is said that Sáhíwál was founded by Gul Bahlak, one of the ancestors of the Biloch Chiefs of this place, and was so named after "Sai" of the Jhammat caste, who was the manager of the property. At one time Sáhíwál did a brisk trade with Multán and Sukkur in cotton, grain, and *ghi*, and was also the centre of the barilla industry, but since the advent of the Jech-Doab railway, the markets of Sillánwáli and Sargodha, 17 and 23 miles away, have absorbed nearly all the produce that once came to Sáhíwál. The population has decreased from 9,210 at settlement, and this is due partly to the departure of shopkeepers and others to the rival marts, and partly to the lack of sanitation; plague was severe in 1904 and 1907. The only manufactures for which Sáhíwál is noted are hardware and turnery in ivory and wood and lacquered work. The municipality of Sáhíwál was first constituted in 1867; it is of the second class with three nominated and six elected members, the President being usually the Tahsíldár. The public buildings are schools for boys and girls, a dispensary, a veterinary hospital, a *sarái* with rest-house attached, a town hall and a police station.

The municipal income has risen from Rs. 7,750 to Rs. 15,000 owing to the raising of octroi rates, and the narrowing of octroi limits. Up till recently the entire revenue estate was included

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in the municipal boundary, with the result that the Alienation of Land Act did not apply : this has now been rectified, and it is to be hoped that the original Jhammat and Biloch owners will be successful in retaining such of their lands as are left to them.

There is a bench of two Honorary Magistrates, and an honorary Civil Judge

Miáni.

The town of Miáni lies in north latitude 32° 31′ 48″ and east longitude 73° 7′ 30″, and contains a population of 5,819. It is situated on the left bank of the Jhelum, opposite Pind Dádan Khan. The old town was an ill-built place of narrow lanes and *bazárs*, the upper storeys of the houses and shops almost touching each other, and was not surrounded by any wall ; but in Captain Davies' time, about 1865, a new and commodious square was erected, named Daviesganj, and a wall with gates built round the east part of the town. From time immemorial Miáni was an important mart for the salt from the mines on the opposite side of the river. The original town was called Shamshabad. This was swept away by the river, and a town on the present site was built under the auspices of Asaf Khán, father-in-law of the Emperor Shah Jehán, by two Hindús, Mádho Dás and Shib Rám. Like Bhera, it grew and prospered till the decline of the Mughal monarchy, and, like Bhera, it was plundered and destroyed by Núr-ud-Dín, General of Ahmad Shah, in A D. 1754, and the inhabitants were dispersed in the neighbouring villages. In A. D. 1787, Maha Singh, father of Ranjít Singh, induced a number of the descendants of the old residents and others to rebuild the town, and re-opened the salt mart ; but it appears never to have entirely recovered Núr-ud-dín's visitation, for the descendants of the families which then abandoned the place and took refuge in the adjoining villages are still to be found in them. The prosperity of the town has lately suffered a severe blow of a different kind. Until the extension of the railway to the Khewra salt mines across the river, Miáni was the depôt for the salt exported from those mines down country, and from this fact was known as Lún Miáni, but since then the salt trade has almost left it, and its glory has departed. It still, however, does a considerable trade in lime-burning. Its population has decreased by more than 25 per cent. since 1881. Miáni lies low and is subject to floods and fever ; in 1892 the death rate was 73 per thousand per annum. A drainage scheme is being devised. Plague was very severe in 1904 and 1907.

The municipality of Miáni was at first constituted in 1867. It is a municipality of the second class with 3 nominated and 6

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Local and Municipal Government.

Miáni.

elected members, the elected president at present being the Náib Tahsíldár. The annual income for the last five years has averaged Rs. 17,542, as against Rs. 7,378 at settlement. The public buildings are a police station, a dispensary, a town hall, a school, and a *serái* with rest-house attached. There is also a railway station.

There is an Honorary Magistrate and Civil Judge of the 1st class. The "feast of lamps," on the occasion of the Diwáli festival, is here celebrated by much gambling, but measures are being taken to put a stop to this.

Sargodha.

The foundation stone of Sargodha Town was laid on 22nd February 1903. At first the town was maintained from the town improvement fund, the chief source of income being the sale of *nazúl* lands. In 1907 a notified area committee was constituted with 4 nominated members and the Sub-Divisional Officer as *ex-officio* President. In 1909 Sargodha Civil Station was incorporated in the notified area. Sargodha municipality was constituted in 1914. It is of the second class with 12 members, all nominated, 4 officials and 8 non-officials. The Deputy Commissioner is *ex-officio* President. The town is divided into 8 wards for municipal purposes. The municipal area including the town proper and the Civil Station is supplied with water from water-works. Lighting is furnished by gas lamps, both being maintained by the municipality. Further, the municipality maintains a garden which is situated between the Civil Station and the town proper. The income and expenditure of the municipality are detailed below:—

	Income.			*Expenditure.*		
	Rs.	A.	P.	Rs.	A.	P.
1914-15	37,981	5	8	31,419	15	5
1915-16	49,153	3	5	45,853	14	7

thus giving an average of Rs. 43,567 as annual income and Rs. 38,636 as annual expenditure.

The chief sources of income at present are a house-tax, a water-tax, rent of shops, city sweepings, lambardári fee, lease of municipal lands, and a terminal-tax.

The main heads of expenditure are:—

Water-works, lighting, conservancy, and the garden.

The chief buildings of interest in the town proper are the Jamma Mosque, the Gurdawára, the Arya Samáj, and the Mission Reading Room. The public buildings are:—the Municipal Hall,

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Local and Municipal Government.

Sargodha.

the District Board School, the Zail House, and the Rudkin Library in the Municipal Garden.

There are 8 ginning factories which are described in Chapter II. In the Civil Station there are the following public buildings:—the Public Works Office, the Army Remount Office, the Canal Offices, the Post Office, the Railway Office, the District Board Office, the Session Judge's Court, the District Courts, the Police Lines, the Tahsíl, the Police Station, the Jail, the Civil Rest-House, the Public Works Department Rest-House, and the Canal Rest-House.

Besides the 15 bungalows occupied by Government officials as residential houses, there are also about 32 bungalows owned by private individuals. The population at the last census amounted to 8,849 souls. However it has now considerably increased owing to the removal of the head-quarters of the district to this place and consequent exodus from Shahpur. Sargodha is a fairly healthy place except for the almost annual visitation of the plague. It is the chief centre of trade in the district and exports very large quantities of grain to Karáchi and several European firms have established agencies here.

In addition to the District Courts, Mr. P. N. Broadway works as an Honorary Magistrate in the cold weather, and there is also a bench, described in Chapter III.

In 1915-16 the incidence of taxation in the *five* municipalities was as follows:—

Municipality.	*Population.*	*Income from taxation.*	*Incidence per head of population.*
		Rs.	Rs. A. P.
Bhera ...	15,202	27,191	1 12 7
Miáni ...	5,819	11,406	1 15 4
Khushab ...	10,159	15,590	1 8 6
Sáhíwál ...	7,658	10,954	1 6 10
Sargodha ...	8,849	13,304	1 8 0

Notified Area.

There are five towns in the district—Shahpur, Shahpur Civil Station, Bhalwal, Phularwán, and Sillanwáli—which are Notified Areas, and managed by committees, the membership of which is given in Appendix I.-E. Of these Bhalwal will probably become a regular municipality, as soon as the tahsíl head-quarters are moved there from Bhera. Like Phularwán and Sillanwáli it is mainly notable for its market (*mandi*), which has been described in Chapter II-F. It is also the Makka of all those who suffer from eye-troubles, especially cataract; the dispensary is described in Chapter III-J. Bhalwal, Phularwán and Sillanwáli are all

quite new foundations, and owe their existence to the Railway. Up to now their history has been only that of birth and rapid growth.

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Local and Municipal Government

Shahpur town.

Shahpur is a small town with 5,608 inhabitants, situated at a distance of about two miles from the Jhelum river. Formerly it was on the very bank of this river, which has of late been receding in the direction of Khusháb. Shahpur with the adjoining villages, Nathuwála, Jalálpur and Kotla-Sayadán, was founded by the Sayads who still form the proprietary body. The common ancestor was Shah Shamas, whose tomb may still be seen near Shahpur. The original tomb was to the north of the town, and was washed away by the river, when the coffin was removed to its present site, east of the town. He is now worshipped as a saint and a large fair is annually held in his honour between 23rd and 25th Chet (the beginning of April). A large number of people (about 15 thousand) come from distant places to pay their homage to this saint at his shrine, which is shaded by a grove of trees. His son Shah Muhammad's tomb is situated to the west of the town, and has recently been renewed in the modern style. He is also worshipped as a saint like his father, but no separate fair is held in his honour. The town lies on the road from Lahore to Dera Ismail Khan and has some trade in country cloth. It is 23 miles from Sargodha, now the headquarters of the district and 5 miles from Khusháb. The road to Khusháb turns off at a right angle immediately in front of a picturesque gate which leads to the only *bazár*, of which the town can boast.

There are four schools in the town. In the western corner of the town may be seen the low *kacha* walls of what was once a fort of the Sayads, the site of which Najaf Sháh, Zaildár, still occupies; while outside the town and further east of the shrine of Shah Shamas, about one mile from the fort of the Sayads, are the ruins of an old Sikh fort.

This town was formerly a second class municipality in the Punjab, but since 1907 it has been converted into a Notified Area. The committee consists of 5 members, the Tahsíldár is the President and the remaining 4 are nominated members.

Civil Station, Shahpur.

The original site of the head-quarters station was within the boundaries of Nathúwála on the riverside of Shahpur town, but the houses having been washed down in the great flood of 1849, the present site was selected about three miles to the east of Shahpur town on the road to Lahore. The wisdom of the selection was proved in the great flood of July 1893, when the Civil Station was an island surrounded by water on all sides for several

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Local and Municipal Government.

Civil Station, Shahpur.

miles. The station has a small *bazár* neatly laid out with fairly wide streets. The roads are wide and well shaded by trees and are watered in the hot weather from an inundation canal, which runs through the station. Picturesque glimpses of the Salt Range close the view to the west. Good crops of grain and grass are raised in the lands attached to the station, chiefly by the aid of canal irrigation. The station has a large hospital, two schools, two tanks, three public gardens, three rest-houses, and a *sarái* called Malik Sáhib Khán Wála.

Up till April 1914, the Civil Station was the district head-quarters; the old District Courts are now used as a tahsíl, the tahsíl having been made over to the Islámia High School, recently founded. The Deputy Commissioner's house and office are occupied by the Sub-Divisional Officer of Khusháb: the jail is being temporarily used as a sanitarium for consumptive prisoners. But though the station still retains some of its importance, it has been hard hit by its loss of prestige. Perhaps it will revive if it becomes a junction for the Ráewind-Khusháb and Bhera-Shahpur Railways. The annual horse fair, which was abandoned in 1914, has again been revived, much to the satisfaction of the residents. For several years past, Shahpur has had the lowest death-rate of any town in the Province; the drinking water is for the most part brackish, but apparently its cathartic properties are beneficial.

The Notified Area is managed by a committee of three members, the Sub-Divisional Officer, the Assistant Surgeon and the Tahsíldár, but their energies are devoted entirely to watch and ward, lighting and conservancy. There is an honorary magistrate who sits in the tahsíl building, and a civil judge.

Bhalwal.

This *mandi* was opened in 1903 on the Jech Doáb Railway at the railway station of Bhalwal so named after the old proprietary village. It is on the south-west of Bhera, at a distance of 11 miles, and 28 miles west of Malakwál. The *mandi* lies in the middle of the most fertile part of the Jhelum Colony and commands a large tract of the country in Bhera Tahsíl, comprising a large number of Colony *chaks* and proprietary villages irrigated by the Lower Jhelum Canal. It is the head-quarters of a sub-tahsíl and contains a police station and a flourishing *mandi*.

The following roads connect the *mandi* with the *chaks* and villages :—

On the north-east	... ...	Bhera-Bhalwal.
„ „ north ...	... ...	Shahpur-Chakrámdás and Shahpur Lak.
„ „ south ...	... ...	Kot Moman-Laliáni.

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Local and Municipal Government.

Bhalwal.

In 1907 the export by rail amounted to 3 lacs of maunds of wheat, *toria* and cotton, and since then it has been increasing. The *mandi* contains 231 shops, 137 residential houses, 3 cotton factories, 3 large European firms, police station, sub-tahsíl, dispensary, a Vernacular Middle School, post and telegraph office, a rest-house and a public *serái*. Population according to the census of 1911 is 1,400, but has since then nearly trebled with the increase in trade. It will increase still further when the tahsíl head-quarters are moved here from Bhera. Before 1909, the conservancy and *chaukídára* charges were met from the Town Fund and *chaukídára* taxes respectively. The increase in the population necessitated the constitution of the town as a Notified Area. Accordingly the area was notified by *Punjab Gazette* Notification No. 375, dated May 3rd, 1909, and a tax at the rate of 9 pies per annum on the annual value of all buildings was levied to meet the expenses. The committee consists of 5 members including the Náib Tahsíldár as *ex-officio* member and president. Details of imports and exports of the Notified Area will be found in the table on page 303.

Phularwán *Mandi.*

This *mandi* was opened in 1903 on the Jech Doáb Railway at a railway station named Phularwán after the name of the old proprietary village.

It is on the south of Bhera at a distance of 8 miles and 19 miles west of Malakwál.

The *mandi* commands a large tract of the country to the east of the district in the Bhera Tahsíl, including a few colony *chaks* and a large number of the proprietary villages irrigated by the Lower Jhelum Canal, the produce of which is brought here for sale and exported chiefly to Karáchi.

The *mandi* is connected with the Colony *chaks* and proprietary villages which are approached on the north by the Bhera-Phularwán, on the south-east by the Miána-Gondal-Bhabhra *viâ* Salam and on the south by the Kot Moman-Midh Ránjha roads.

In 1910 the export by rail amounted to 275,000 maunds, chiefly of wheat, *toria* and cotton, and since then it has been increasing.

The *mandi* is a promising one consisting of shops, residential houses, two cotton factories, three large European firms, a school, a Civil rest-house, a post and telegraph office and a public *serái*. Population according to the census of 1911 is 777 souls, but this census was taken at a season when many of the inhabitants had

CHAP. III-E. Local and Municipal Government. Phularwán *Mandi*.

left the place on account of plague; and it may now be fairly estimated at three times the above figures.

Before 1911, the conservancy and *chaukidára* charges were paid from the town funds and the *chaukídára* taxes respectively. The funds were administered by the Colonization Officer. The increase of the population made it necessary for the *mandi* to be constituted a notified area which was effected by Gazette notification No. 52[illegible], dated 19th September 1911, and a tax at the rate of Re. 0-0-9 in the rupee per annum on the annual value of all occupied buildings was levied to meet the town expenses.

The committee consists of three members, one being official, and two non-official, with the Tahsíldár as *ex-officio* President.

Details of the imports and exports of the *mandi* will be found on page 303.

Sillánwáli.

This *mandi* was opened in 1903 on the Jech Doáb Railway at a railway station Sillanwáli so named after an old hamlet in its neighbourhood. It is south of and at a distance of 17 miles from Sahíwál and 8 miles from Barána in the Jhang District to the north.

The *mandi* commands a larger tract of country than any other *mandi* in the Jhelum Colony; serving more than 200 Crown and proprietary villages irrigated by the Lower Jhelum Canal. The produce of these villages is brought here for sale and exported chiefly to Karáchi.

The whole of the country is connected with the *mandi* by important roads in every direction, which offer every facility to the *zamíndárs* and merchants for the disposal of their produce. In 1910 the export by rail amounted to 420,000 maunds of wheat, *toria* and cotton and is increasing annually.

The *mandi* consists of shops, residential house, 4 factories, 5 large European firms, a thána, a school, post and telegraph office, a rest-house and medical dispensary and municipal *serái*. Population according to the census of 1911 is 1,050 souls, but this census was taken at a season when many of the inhabitants had gone to their original homes, and it may now be estimated at three times the above figure.

Before 1910 the conservancy and *chaukidára* charges were paid from the town fund and *chaukídára* taxes respectively. The increase in the population necessitated the constitution of the town as a notified area, and for the improved arrangements of conservancy

and lighting, the area was declared a notified area in Gazette notification No. 813, dated 13th December 1910, and a tax at the rate of 9 pies in the rupee on the annual value of all buildings was levied to meet the expenses. CHAP. III-F. Local and Municipal Government. Sillanwáli.

The committee consists of 5 members including the Tahsíldár as *ex-officio* member and president.

Imports and exports of Notified Areas.

The detail of imports and exports of the notified areas will be found in the table below. The figures are in tons:—

Year.	Bhalwál.	Sillanwáli.	Phularwán.
1909-10	803 Import 612 Export	...	...
1910-11	36,901 Import 24,832 Export	43,915 Import 71 Export	...
1911-12	14,303 Import 12,491 Export	30,335 Import 7,878 Export	20,804 Import 152 Export.
1912-13	4,473 Import 2,168 Export	4,406 Import 13,100 Export	3,429 Import. 1,889 Export.
1913-14	5,441 Import 12,176 Export	3,412 Import 17,201 Export	1,519 Import. 8,946 Export.
1914-15	6,435 Import 5,748 Export	3,449 Import 5,889 Export	2,675 Import. 3,251 Export.
1915-16	4,557 Import 3,987 Export	4,020 Import 4,914 Export	3,885 Import. 8,201 Export.

Section F.—Public Works.

Public Works.

Public Works.

The Shahpur Division of the Roads and Buildings Branch, Public Works Department, has its headquarters at Sargodha, and is in charge of an Executive Engineer: the Shahpur District is part of the Shahpur sub-division, together with Jhang, and is in charge of a Sub-Engineer. The Department builds and maintains works for the following departments:—

I. Imperial ... (*a*) Civil—(*i*) Post and Telegraph.

(*ii*) Ecclesiastical (churches and cemeteries).

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Public Works.

Public Works.

(b) Military, Army Remounts (i) Sargodha Depôt.

(ii) Jhelum Canal Colony Circle.

II. Provincial ... All works and repairs carried out under Budget head "45—Civil Works."

For Local Bodies, all estimates exceeding Rs. 2,500 are scrutinised in advance of construction, and advice is given gratis for other projects.

The chief works recently carried out have been (1) the Police lines and quarters, the sub-jail, the enlargement of the District Office, and three official residences in the new district head-quarters, (2) a police station and quarters at Khusháb ; (3) two new rest-houses in the Salt Range.

The principal projects about to be undertaken are (1) the extramural drainage of Bhera, (2) Tahsíl at Bhalwal, (3) Police Station and quarters for Sargodha City.

The total expenditure for the last five years has been —

Year.				Rs.
1911-12	...	...	...	2,52,000
1912-13	...	...	...	5,00,000
1913-14	...	...	...	4,00,000
1914-15	...	...	...	4,20,000
1915-16	...	...	...	3,25,000

Army.

Section G.—Army.

Recruiting.

There are no cantonments or troops in the district, but it has provided a very large number of recruits both for Cavalry and Infantry. The 18th King George's Own Tiwána Lancers are specially connected with the district, and the 9th Cavalry (Hodson's Horse) ; the 13th Lancers, 15th Lancers, 17th Lancers, 36th Jacob's Horse, and the 39th King George's Own Central India Horse all recruit largely from the Tiwánas, Awáns and Baloches. Of the Native Infantry regiments perhaps the 24th, 40th, 54th, 55th, 57th, 125th, and 129th are those which attract most men from this district. The 53rd Silladári Camel Corps has its headquarters at Sargodha, and spends the grazing season in the Salt Range. The late Jamadár Muhammad Khán of Bajar was adjudged to be the best man-at-arms at the Delhi Darbár. Subedár Zamán Khán of Wahir won the Military Cross in Flanders. And many other residents of this district have reached high positions in all branches of the service. A

list of military distinctions and of retired officers of Commissioned rank will be found in the Appendix.

CHAP. III-H.

Police and Jails.

Police

Section H.—Police and Jails.

The district lies within the Western Police Range of the Province under the control of the Deputy Inspector-General of Police whose head-quarters are at Ráwalpindi. The police force is controlled by a District Superintendent of Police, with head-quarters at Sargodha : an Assistant Superintendent is generally in charge of the Khusháb Tahsíl and part of Shahpur.

The strength of the force on 1st July 1915 was as follows :—

Rank.	Grade.	Salary per mensem. Rs. A. P.	No. of officers.
Inspectors (6)	III ...	175 0 0	3
	IV ...	150 0 0	3
Sub-Inspectors (26)	II ...	80 0 0	5
	III ...	70 0 0	6
	IV ...	60 0 0	11
	V ...	50 0 0	4
Head Constables (79)	I ...	20 0 0	17
	II ...	17 8 0	27
	III ...	15 0 0	35
Constables	...	9 8 0 (average)	546

These figures include one mounted Head Constable and four mounted constables. The salaries of the force amount to Rs. 1,10,158 per annum.

These 657 members of the Force were distributed as follows :—

	Standing guards and fixed duties.	Protection and detection.	Reserve.
Inspectors	2	4	...
Sub-Inspectors	6	18	2
Head Constables	27	49	3
Constables	109	330	107
Total ...	144	401	112

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Police and Jails.

Police.

In 1897 there were altogether 445 Police in the district of whom 100 were municipal; of this number 291 only were employed in protective and detective work. Municipal police no longer exist, their duties having been taken over by the Provincial Service. There is now one Police Officer engaged in protective and detective work for every 1,714 persons resident in the district, as against one for every 1,696 persons in 1897, so that the strength of the force has been increased practically in the same ratio as the total population. The duties of watch and ward are however shared with the regular Police force by the Village Watchmen or *Chaukídárs* who are described below.

Police Stations.

The following is a list of the Police Stations and Circles in the district; the former are under the charge of a Sub-Inspector and the latter of an Inspector of Police :—

Tahsil.	Serial No.	Police Station.	Circle.
Sargodha ...	1	Sargodha Sadr	Sargodha.
	2	Sargodha City	
	3	Sillánwáli	
	4	Kirána	
Shahpur	5	Sáhíwál	Shahpur.
	6	Shahpur	
	7	Jhawarián	
Khusháb	8	Mitha Tiwána	Khusháb
	9	Núrpur	
	10	Khusháb	
	11	Naushehra	
	12	Uttera	
	13	Katha Sagral	
Bhera	14	Bhalwál	Bhalwal.
	15	Kot Moman	
	16	Midh Ránjha	
	17	Bhera	
	18	Miáni	

There is a first class outpost at Padhrar and second class road posts are at Dhrema, Mitha Lak, Bhagtánwála, Laksin, and Chak Rám Dás.

There are punitive posts at Kot Moman, Khura, and Choha.

CHAP. III-H
Police and. Jails.
Cattle-pounds.

Cattle pounds are attached to all Police Stations except Sargodha City and Katha Saghral; the last-named makes use of a District Board pound at Katha Masral. There are other pounds at Mitha Lak and Nikdur in Sargodha Tahsíl, at Nihang in Shahpur, and at Jaura, Kund, Pail, Rajar, Girot, Nurowána, Sodhi Jaiwála, and Sakesar in Khusháb. These are all kept up by the District Board, and are in charge of some local official, such as the schoolmaster.

Village Watchmen.

The duties of watch and ward in the villages are performed by village servants, known as *chaukídárs* whose numbers are as follows :—

Tahsíl.	Sanctioned number of watchmen.	Average rural population per watchman.	Average number of residential houses per watchman.
Bhera	269	610	138
Shahpur	224	559	130
Khusháb	251	660	155
Sargodha	314	425	90

The usual rate of pay is Rs. 5 per month, but a certain number, who rank as *dafadárs*, get more, and two in Sargodha get less. In the Colony estates, in addition to their pay, the *chaukídárs* are given 3 or 5 *killas* of land to cultivate. The salaries are paid out of village cesses, such as *kamiána*, or out of a special tax, known as *chaukídára*, which is generally paid by householders according to the relative value of their houses, the very poor being exempted :—

Rs. per mensem.	Bhera.	Shahpur.	Khusháb.	Sargodha.
6	...	1	...	...
7	7	1	14	...
8	2	2	...	3
10	1	...	...	...
2½	...	...	...	1
1⅔	...	...	...	1

Number of villages in which *chaukídárs* are paid.	Bhera.	Shahpur.	Khusháb.	Sargodha.
(*a*) Entirely from *kamiána* or other village cess.	29	...	...	...
(*b*) Entirely from *chaukídára* cess	207	80	99	425
(*c*) Partly from a village cess and partly from *chaukídára*.	29	164	49	...

CHAP. III-H.

Police and Jails.

Village Watchmen.

Wherever the watchmen are unable to cope with thieves and burglars a system of patrols by the villagers themselves has been organized by the headmen, at the instance of the District Magistrate and Superintendent of Police. Each householder has to take his turn to serve on a patrol, according to lot, or else to make some contribution to the expenses of lighting: hence the system is known as *thikri pahra*.

Detection of crime.

The only form of crime for the detection of which any special staff exists is cattle theft, which has already been fully discussed. Finger-prints of all persons 'known to the Police' are taken and sent to the Phillaur bureau for record. There is a case on record in which the bureau was asked to report, if possible, the identity of a corpse which had decayed past recognition. The bureau identified the finger-prints without difficulty, but assigned them to an individual who happened to be alive in the jail at the time. It was then ascertained that the officer, who had been deputed to take the corpse's finger-prints, had fought shy of handling corrupt flesh, and rashly hoped that the Galton system might not be infallible.

Statistics of cognizable crime.

The number of cognizable cases reported to the Police year by year will be found in Table 48, together with the number sent for trial, and the proportion of convictions. The number of cases which ended in conviction was in 1901 as high as 52 per cent. of the number of cases reported and 74 per cent. of the cases sent for trial. Thereafter, the number of convictions failed to keep pace with the increase in cases reported, and by 1911, though the reported cases had more than doubled, only 31 per cent. of them (representing 71 per cent. of cases sent for trial) resulted in conviction. A great improvement was effected in 1912 by Major O'Brien as District Magistrate and Mr. Cocks as Superintendent of Police. In that year 43 per cent. of the reported cases and 74 per cent. of the decided cases resulted in convictions. Order was restored in the Salt Range, which had been at the mercy of a few desperate characters, and public confidence in the efficacy of the criminal law was greatly increased.

Criminal tribes, villages and individuals.

The few Sánsís in the district are comparatively inoffensive, and vagrant Bhawarias do little harm. There is a considerable amount of organized crime in the matter of cattle theft, but in this nearly all the tribes of the Thal, Bár, and riverain take a hand. Favourite clearing-houses for stolen cattle are at Dravi in the Northern Thal, Jatoiwála in the extreme south, and near the Lagहári plantation on the banks of the Jhelum. The village of Padhrar in the north-east corner of Khusháb Tahsíl was for

CHAP. III-H.

Police and Jails.

Criminal tribes, villages and individuals.

years so given up to bad characters that it was necessary to establish a Police outpost there permanently; it has now turned over a new leaf, and provided a large number of men for the army. Khán Muhammadwála, to the south of Bhera town, may be considered a criminal village, being hopelesely incorrigible in the matter of cattle-lifting. From time to time some individual becomes notorious as a man who will stick at nothing; such are Sultán of Hamoka, who had to be surrounded and starved into surrender; Shera of Malwal, who had a very long list of murders to his credit; Masti and Iláhu of Padhrar, who tyrannized the Salt Range; and three Musallís of Khabakki, who would commit a murder for Rs. 5 apiece.

Jails.

There was formerly a 3rd class District Jail at Shahpur, in charge of the Civil Surgeon, with accommodation for 265 males and 10 females, and a daily average attendance of about 200 prisoners. The transfer of the district head-quarters to Sargodha has led to the institution of a sub-jail at that station, and the old District Jail has now been converted into a temporary sanitarium for all prisoners in the Punjab suffering from tubercular complaints. The number and accommodation of lock-ups is shown in Table 49. There is no reformatory in the district.

Section I.—Education and Literacy.

Education and Literacy.

Education.

Table No. 50 gives statistics of education as ascertained at the census of 1911 for each religion and for the total population of each tahsíl. Statistics regarding the attendance at Government and Aided Schools will be found in Table No. 51, and a brief account of these institutions will be found below.

Educatoin of males.

The progress made in the education of boys is in some sense indicated by the following figures :—

Years.		Number of male literates.	Percentage of male literates to male population.
1881		1[illegible],588	4·8
1891		16,665	6·4
1901		20,684	7·6
1911		24,886	6·6
Detail by tahsils, 1911.	Bhera	8,353	6·4
	Shahpur	5,496	7·3
	Khusháb	4,580	5·1
	Sargodha	6,457	7·8

CHAP. III-I. — Education and Literacy. — Education of males.

This compares quite favourably with the standard of the Province, for which the percentage is 6·3 ; Shahpur was one of very few districts which showed an increase in the number of male literates from 1901 to 1911, and the diminished percentage is due to the much stricter test of literacy now insisted on, *viz.*, the ability to write a letter and read the answer to it. On the other hand in 1891, there were in addition to the 16,605 'literates' 4,528 boys described as 'learning', *i.e*, still at school, and doubtless many of these had learnt to read and write. There can be no complaint about the rate of numerical progress; in fact there is a real danger that the boys and the buildings may outgrow the masters, and that the District Board may find it has cut its gown a little too big for its cloth.

Education by ages.

The figures in the margin show the percentage of literates among boys of various stages of growth : the Provincial average for the 15-20 stage is only 7·8. The suggestion that the generation now growing up is producing fewer scholars than the "giants of old" is certainly due to some defect in the statistics, but it is remarkable that it appears not only in the figures for the whole Province and nearly every district of the Province, but also in the return for 1891. Mr. Wilson suggested that literacy might be conducive to length of days, but it must be confessed that this seems rather fanciful. A more likely explanation is that young men of 21, 22 or over will, if they are educated, return their ages correctly, whereas if they are illiterate they will be very apt to guess 20, or to give the enumerator a field of choice, in which 20 is the 'glaring' number.

Age.	Percentage literate.
0-10 ...	·3
10-15 ..	4·8
15-20 ...	9·2
Over 20 ...	10·0

Education and religion.

The Mussulmán population is very backward in comparison with the Hindús and the Sikhs. They made practically no headway in the 20 years preceding the last census. There has, however, been a considerable advancement of learning since 1911 among the peasants, due to a very fortunate combination of propitious circumstances. Government was able to display great munificence in the matter of educational projects; the Deputy Commissioner, Major O'Brien, C.I.E., was an enthusiast and a propagator of enthusiasm, and several of the most influential landowners of the district—notably Nawáb Mubáriz

Literate of total population.	1881.	1891.	1901.	1911.
Hindu ...	24	31	35	31
Sikh ...	22	37	46	30
Mussulmán	1	1·9	2·2	2
Christian ...	68	63	77	8·6

CHAP. III-I.

Education and Literacy.

Education and religion.

Khán and Qureshi Muhammad Hayát—were alive to the necessity of mental development for any faith that aspires to be respected as either a Church or a State. The Shahpur Islámia High School ought to effect a marked improvement in the proportion of brain to muscle among Muhammadans. It will be observed that the Hindús and Sikhs show a falling off since 1901; in the former case this is probably due merely to stricter definition; among the Sikhs, the incursion of illiterate husbandmen has had a marked effect on a class that were formerly given over to commercial and literary pursuits. The sudden collapse of Christian scholarship suggested by the figures is a greatly exaggerated instance of the same thing: in this case the highways and byways have furnished nearly the whole company.

Education and caste.

Although no detailed statistics for the district are given either in Volume II or in the Provincial Census Report, it would appear that the percentage of literates is highest among the learned professions, shopkeepers, and traders; the priestly and levitical castes (Brahman, Sayyad, Qureshi, Ulema) also show a fairly high proportion of educated men. The artizan classes are beginning to show considerable keenness in school-going, the Mirásís and the weavers being especially ardent.

Education of girls.

Although there are only 8 literates to every thousand females in the district, this represents a fourfold increase in the number since last settlement. The Shahpur Tahsíl, with a proportion of 12 per thousand, is easily the most progressive, and this is probably due to the enterprise of Rái Sáhib Díwán Chand, whose Shahpur Girls' School was one of the best in the Province for years. The Mussalmán woman is still very shy of schools, but the Sikh girls show a good average of enlightenment. Unlike the boys, the girls under 20 make a better show than the grown-ups; but the education imparted is still very elementary, and progress is bound to be slow: the difficulty is that very few of the peasantry realize that intellect in a woman is an advantage, and unfortunate incidents not infrequently seem to point a reactionary moral; as for instance, in the *cause celebre* in which a maiden's intercepted love letter caused a young man to be packed up in kerosine tins.

Religion.	Number of literates.	Percentage.
Hindu	1,143	3·5
Sikh	1,179	8·0
Mussalmán ...	176	·06
Christian ...	97	2·6

Age.	*Percentage.*
0-10	·1
10-15	1·4
15-20	2·0
Over 20	1·0
All ages	·8

CHAP. III-I.

Education and Literacy.

Knowledge of English.

There are 2,348 persons in the district able to read and write English, as against 301 in 1891; the proportion of English literates (6 males and ·3 females *per mille* of total in each case) is lower than the provincial average (8 and 1 respectively); of the total 2,253 are males and 95 females, and out of these 112 males and 82 females are Christians. Of the men, Hindús, Christians and Sikhs can boast percentages of 3·2, 2·3, and 1·4 respectively; Christian women also reach 2·2 per cent.; but the numbers of all other women and all Mussalmáns of both sexes literate in English is quite insignificant. An interesting speculation, which does not lend itself to statistical treatment, is the degree to which English words are finding their way into the vocabulary of the common peasant: the majority of these words are borrowed from the technical jargon of some Government Department, and their adoption into the vernacular means a real increase in the mental stock-in-trade of the locality. Sometimes an English word will acquire a curiously specialised meaning in the course of adoption; the most interesting example of this is the word "Fund," which now is quite definitely assigned to fraudulent methods of business.

Educational Institutions.

In Table 51 will be found figures showing the number of schools and scholars of various standards, while Table 52 shows what sums have been spent each year on education. In the twenty years between 1891 and 1911 the number of literates increased from 17,080 to 27,483, and the percentage of literates to the total population rose from 3·5 to 4·0. Since 1911, the rate of the progress has been considerably more rapid, thanks to a fortunate combination of financial abundance and administrative energy. The educational institutions of the district have been multiplied to this extent :—

YEAR.	PUBLIC SCHOOLS.							PRIVATE SCHOOLS.	
	Secondary.			*Primary.*		*Elementary.*			
	High.	A.-V. Middle.	V. Middle.	Boys.	Girls.	Boys.	Girls.	Advanced.	Elementary.
1896	2	4	1	43	11	28	1	11	332
1911	2	6	4	69	19	32	3	19	231
1915	5	8	4	163	22	48	12	19	218

By tahsíls the present distribution of public schools is :—

TAHSIL.	SECONDARY (BOYS ONLY).			PRIMARY.		ELEMENTARY.			
						Aided.		*Unaided.*	
	High.	A.-V. Middle.	V. Middle.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Bhera	2	2	1	37	4	5	2	2	2
Shahpur	2	2	...	27	9	12	3	4	...
Khusháb	...	3	3	47	8	10	1	...	1
Sargodha	1	1	...	52	1	13	2	2	1
Total ...	5	8	4	163	22	40	8	8	4

The total numbers are :—

—	Bhera.	Shahpur.	Khusháb.	Sargodha.	District.
Boys	49	47	63	69	228
Girls	8	12	10	4	34
Total .	57	59	73	73	262

There are High Schools at Bhera (one managed by Government and one by the Arya Samáj), Sargodha, Farúka (a Khálsa institution), and Shahpur. The Anglo-Vernacular Middle Schools are at Miáni, Shahpur, Sáhíwál, Khusháb, Naushehra, Bhalwal, Hadáli, and Sargodha. Vernacular middle Schools are at Midh, Bánjha, Núrpur, Mitha Tiwána, and Katha Sagral. The Primary Schools are scattered all over the district, and the District Inspector is of opinion that when 20 new schools already contemplated are built, nearly all children will have a school within

CHAP. III-I.

Education and Literacy.

Educational Institutions.

two miles of their homes. The greatest interest in education is displayed by the colonists at Sargodha Tahsíl, but in the Salt Range and Mohar the fact that two middle schools have been started and one raised to the Anglo-Vernacular standard indicates that the inhabitants are ready to subscribe considerable sums for their own improvement. The bulk of the rural population is, however, still apathetic, and only 39 per cent. of the enrolled pupils of the district are agriculturists, while no more than 375 Muslim boys are receiving secondary education. It is to be hoped that the zeal of Nawáb Muhammad Mubáriz Khán, Mián Muhammad Hayát, and other public-spirited Muhammadans in starting the Islámia School at Shahpur will have a stimulating effect. The schools of the American Presbyterian Mission have been noticed in section C of Chapter I.

The number of children now attending public schools is 14,795 while 3,852 attend 237 private schools, mainly devoted to the inculcation of elementary Divinity in mosques and *dharamsálás*. In 1896 there were 4,833 and 3,889 students attending public and private schools respectively, so that the total number of children being educated in some sort has increased in 20 years from 8,722 to 18,647 ; expressed as percentages of the total number of children of school-going age, the increase is from 11·7 to 18·06 per cent., while the percentage attending public schools is now 14·3 as against 6·5 per cent.

Among the 4,607 students in the secondary standard there are no girls. In the primary schools there are 6,922 boys and 1,071 girls; in the elementary schools there are 1,514 boys and 651 girls. The sex of private-school pupils is not specified. Roughly speaking, we may say that the proportion of boys to girls at schools is as 8 to 1, and in this respect there has been little change in the last 20 years. But the percentage of female literates to the total female population has risen from ·2 to ·8.

There are in all 557 teachers, 483 for boys and 74 for girls ; 258 of the boys' teachers are trained, of whom 230 are certificated. There are also 37 boys' teachers and 4 girls' teachers who have certificates, though they are untrained. Salaries have recently been raised, especially for trained men, so there is some hope that the quality of instruction may improve *pari passu* with the quantity of scholars.

Literature.

The character indigenous to the district is the *lande akhar* (tailless letters) character, a sort of short-hand derived from the Nágri ; but this is seldom used except by shopkeepers, who

CHAP. III-J. Education and Literacy. Literature.

generally keep their accounts in this character, and few of whom can read the accounts kept by their fellows of villages at any distance. Gurmukhi and Nágri are taught in the *dharmsálas* and temples. But the character otherwise in universal use, both by Hindus and Musalmáns, is the Persian character taught in the Government schools. Prose literature is almost unknown except in the form of the sacred books of the different religions and commentaries thereon, and practically the only form of indigenous literature is the verses composed by the local bards (*mirási*) and sung or rather recited by them on festive occasions. These are of various kinds, such as the *sarwar*, a historical poem; the *jass* or panegyric; the *pohrī* or epic; the *sitth* or satire; the *marsia* or dirge; the *doha* or *dohra*, rhymed couplets; the *dhola*, a poem in blank verse, generally of an erotic nature. Specimens of most of these have been collected, and published, along with the proverbs, which condense and embody the experience of past generations. The people greatly enjoy listening to the recital of these verses, and are readily moved to laughter by the satires and to tears by the dirges. The recital of original poems by school boys and master is an invariable feature of public meetings; in these considerable talent is often displayed, but horticultural and ornithological similes and metaphors are rather overworked.

Script.			*Number of literates.*
Persian	...	...	12,345
Lande	...	...	7,287
Gurmukhi	...	...	6,024
Tánkre	...	...	845
Nágri	...	...	816

Histories of the Awáns and of the life, times and (on the most comprehensive scale) antecedents of Malik Jahán Khán, Tiwána, of Jahánabad, have been compiled and published in the vernacular. There are two printing-presses now at work—the "*Fayazi*" at Bhera, and the "National" at Sargodha—but no newspapers are now produced in the district. At one time the Bhera "*Dost-i-Hind*" printed in Persian character, had a circulation of some 500 copies.

Section J.—Medical.

Medical. Hospitals and Dispensaries.

There are in the district 21 hospitals and dispensaries, details regarding which will be found in Table 53. Those at Bhera, Miáni, Khusháb and Sáhíwál are maintained by the Municipal Committees of those towns, at a cost of Rs. 14,885 per annum: those at Sargodha, Shahpur, Bhalwal, Naushehra, Núrpur, Girot, and Midh Ránjha are maintained by the District Board, at a cost of Rs. 42,255. The District Boards of Shahpur, Attock and Miánwáli jointly maintain the dispensary at Sakesar, which costs Rs. 1,324. The Canal Department have dispensaries

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Medical.

Hospitals and Dispensaries.

at Sultánpur, Rodiánwála, Kandíwála, Beriwála, Wan and Miáni; the first named five are open to the general public, and the District Board contributes Rs. 320 to each of them.

There is a Police Hospital at Sargodha, maintained by Government. Malik Umar Hayát Khán, Tiwána, keeps up the private dispensary at Kálra, paying Rs. 671 per annum. The Bhera Female Mission Hospital costs Rs. 3,306; the District Board contributes Rs. 300 and the Municipal Committee Rs. 100, but the bulk of the cost is borne by the American Presbyterian Mission. The hospitals at Shahpur, Bhera and Sargodha Civil and Police) are in charge of Assistant Surgeons: the remainder are in charge of Sub-Assistant Surgeons—at Kalra a retired Military Officer, and at Bhera a lady—all are under the control of the Civil Surgeon. In 1914, there were 9,624 surgical operations performed, of which 1,784 were classed as " selected operations"; no less than 752 of these were for cataract, and for this complaint Pandit Nand Lál of Bhalwal, whose professional reputation is deservedly great, treated 683 persons. The figures for attendance by sex during the year are these—

	Indoor patients.	*Outdoor patients.*
Male	2,776	144,667
Female	1,529	74,207
Total ...	4,305	218,874

That is to say 2 men in 5 and 1 woman in 4, or 1 person in 3 are treated during the year. During the last twenty years, the total number of patients has doubled, and the number of indoor patients has more than trebled, while the proportion of inhabitants treated has risen from 1 in 5; this is a striking testimony to the growing popularity of European medicine. The number of patients treated at the Bhera Female Hospital was 97 per cent. of the urban female population of the tahsíl, which shows clearly the great service rendered by the Mission: the recent death of Miss Morgan, who had been in charge continuously for 23 years, has deprived the district of a very notable benefactress. The total expenditure of the district is Rs. 62,441 per annum, or just over 4 annas per patient. The total income is Rs. 63,135, of which Rs. 43,763 is contributed by the District Board, Rs 14,948 by Municipal Committees and Rs. 4,424 comes from subscriptions and sale of medicines. These figures do not include the income of departmental hospitals, towards which the District Board contributes Rs 1,600. When the new dispensary at Sillánwáli (which is already completed) is opened there will be a dispensary for every 31,244 souls.

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In addition to the regular medical staff, there has since 1902 generally been an Assistant and a Sub-Assistant Surgeon deputed for special duty to deal with plague, and when very severe epidemics have occurred, an extra officer of the Indian Medical Service has also been provided : the cost of this establishment is borne by Provincial Funds, while local bodies have paid for preventive measures. Small-pox also is separately combated by a staff of 8 Vaccinators ; the people are now entirely in favour of vaccination, with few exceptions, and deaths from small-pox seldom exceed ·3 per thousand of the population ; but in 1912 and 1913 the figures rose to 3·15 and 2·83 respectively. Details will be found in Table 54.

In addition to these Government-managed or aided hospitals, there is a female hospital at Sargodha maintained by the American Presbyterian Mission, and visited by the Lady Assistant to the Inspector-General of Civil Hospitals. The hospital began its existence as a dispensary in 1906, and has only recently become a female institution. It is managed by Doctor Jessie Brown of Jhelum, assisted by a Hospital Assistant of 15 years' experience, and 4 nurses. About 150 in-patients and 10,000 out-patients are treated in a year, and attendances are rapidly increasing. One hundred and twenty-five operations were performed in 1914 : the annual expenditure is about Rs. 4,800 and fees bring in only Rs. 400. There is also a small female dispensary gratuitously maintained by a Presbyterian Bible-reader at Bhalwal.

Village sanitation.

Sanitation in the villages has so far only reached the most elementary stages, and can hardly be said to exist at all. Occasionally the streets and lanes of the village site are cleaned up, but between whiles they are foul with the droppings of cattle and children, and dung-hills and rubbish heaps are allowed in close proximity to inhabited dwellings. The land all round the village is always noisome, but so long as it is under cultivation, the soil is an efficacious oxydising agent. When, as sometimes happens, a field becomes over-manured, and goes out of cultivation, it has to get all its cleaning from the sun. In the towns things are little better : the drainage of Bhera has still to be carried out, though it was determined on more than 20 years ago. Khusháb has not yet got a proper drinking supply, and in many of the villages in the Mohar and Thal Circles drinkable water is unobtainable. In the Colony *Chaks* cleanliness has always been insisted on as desirable, and is to some extent attained, but even here the standard is, judged from the occidental standpoint, low. It is quite certain that any attempt to raise the standard at all abruptly would be foredoomed to failure.

APPENDIX I-A.

List of Divisional and Provincial Darbaris.

1. Malik Muhammad Sher, Tiwána, son of Fateh Sher, of Mitha Tiwána; born in 1894 (provincial).

2. Malik Dost Muhammad Khán, Tiwána, son of Khán Bahádur Malik Sher Muhammad Khán; born in 1887 (provincial).

3. Honorary Captain the Hon'ble Malik Sir Umar Hayát Khán, K.C.I.E., M.V.O., Tiwána, son of Malik Sáhib Khán, Khán Bahádur, C.S.I., of Kálra; born in 1874 (provincial).

4. Sardár Muhammad Chirágh Khán, Biloch, son of Mubárik Khán, of Sáhíwál; born in 1854.

5. Honorary Captain Nawáb Malik Muhammad Mubáriz Khán, Tiwána, son of Sardár Bahádur Malik Jahán Khán of Jahánabad; born in 1863 (provincial).

6. Nawab Malik Khuda Bakhsh Khán, Tiwána, Izzat Nishán, E.J.A.C., son of Malik Sultán Mahmúd of Khawájabad; born in 1866 (provincial).

7. Malik Muhammad Hayát Khán, Tiwána, son of Khán Bahádur Malik Muhammad Khán; born in 1889.

8. Malik Sher Muhammad Khán, Nún, son of Khán Bahádur Malik Hakim Khán, Nún, of Kot Hakim Khán; born in 1876 (provincial).

9. Malik Muhammad Hayát Khán, Nún, E.A.C., son of Malik Fatteh Khán, of Núrpur; born in 1875 (provincial).

10. Malik Malik Khán, Tiwána, son of Malik Ahmad Khán, of Mitha Tiwána; born in 1868 (provincial).

11. Malik Khán Muhammad Khán, Tiwána, son of Malik Sher Bahádur Khán, of Mitha Tiwána; born in 1865 (provincial).

12. Sardár Bahádur Khán, Baloch, of Khusháb, son of Allah Jawáya; born in 1859.

13. Díwán Bahádur Díwán Jawáhar Mal, Sáhni, son of Díwán Bishan Dás, of Bhera; born in 1848 (provincial).

14. Malik Muzaffar Khán, Tiwána, son of Malik Fateh Khán, of Muzaffarabad; born in 1870 (provincial).

15. Pír Chan Pír, Qureshi, son of Pír Satár Shah, of Pail; born in 1867 (provincial).

16. Rái Sáhib Lála Rám Dás, son of Lála Gur Sahái, Sáhni, of Bhera; born in April 1848.

17. Pír Sultán Ali Shah, Sayad, son of Naubahár Shah, of Jahánián Shah; born in 1871.

18. Mián Muhammad Hayát, Qureshi, son of Mián Muhammad, of Sabowál.

APPENDIX I-B.

TITLE-HOLDERS.

Title.	Holder.	Date of bestowal.	Services rendered.
K.C.I.E. ...	Honorary Captain the Hon'ble Malik Sir Umar Hayát Khán, Tiwána, of Kálra.	29-6-06 (C.I.E.) 1-6-16 (K.C.I.E.)	Military services in Somaliland, Tibet, France and Mesopotamia.
M.V.O. (4th class)	Ditto ditto	12-12-11	Deputy Herald, Delhi Darbár.
Nawáb ...	Malik Khuda Bakhsh Khán, P.C.S., Tiwána, of Khawájabad.	28-6-07	British Envoy at Kábul.
	Honorary Captain Malik Muhammad Mubáriz Khán, Tiwána, of Jahánabad.	1-1-15	Foundation and endowment of Islámia High School, Shahpur.
Sardár Bahádur ...	Bhagat Singh of Bhera ...	23-5-00	
Khán Bahádur ...	Risáldár Major Ghulám Muhammad Khán, S.B., Waddhal, of Hadali.	3-6-13	Military services.
Rái Bahádur ...	Lála Ganga Sahái of Sháhpur ..	14-6-12	Settlement.
	S. Suhail Singh, S.B., of Chachar.	1-1-13	Army Medical Services.
	Hari Singh of 126, S.B. ...	1-1-14	Military Police, Port Blair.
Díwán Bahádur ...	Díwán Jawáhir Mal of Bhera ...	5-1-98	Manager, Kálra estate.
	Díwán Daulat Rái of Bhera ...	29-6-06	Bar, Ráwalpindi.
Rái Sáhib ...	Sáhib Ditta Mal, Dingra, of Sáhíwál.	1-1-98	Medical.
	Pandit Attar Chand of Sháhpur...	26-6-08	Ditto.
	Lála Rúchi Rám, Sáhni, of Bhera	1-1-10	Educational.
	Lála Ganesh Dás, Multáni, of Sargodha.	1-1-13	Municipal.
	Lála Rám Dás, Sáhni, of Bhera...	1-1-14	Bar, Sháhpur.
	Lála Gyán Chand of Miáni ...	1-1-14	Public Works Department, Irrigation.
	Lála Ganesh Dás of 124, S. B. ...	...	Balúchistán Police.
Khán Sáhib ...	Risaldár Sikandar Khán of Mitha Tiwána.	16-2-87	Military.
	Maulvi Mahbúb Alam of Sillánwáli.	1-1-00	Railway.
	M. Sher Bahádur Khán of Khusháb.	14-6-12	Police.
	Ghulám Hussain, Varáich, of Chak 50.	22-6-14	Co-operative Credit.
	Chaudhri Rahmat Ullah Khán of Sargodha.	1-1-15	Plague.
	M. Buland Khán of Kufri	1-1-16	Recruiting.
Military Cross ...	Subedár Zamán Khán, Awán ...	1-1-15	Military.

APPENDIX I-C.

RETIRED MILITARY OFFICERS HOLDING THE ORDER OF BRITISH INDIA.

Order of British India, 1st Class.

Honorary Captain Rissáldar-Major Muhammad Amín Khán.
Honorary Captain Subedár-Major Sundar Singh.
Honorary Captain Subedár Major Maghar Singh.
Honorary Captain Rissáldar-Major Mangal Singh.
Honorary Captain Rissáldar-Major M. Ahmad Yár Khán.
Honorary Captain Subedár-Major Chaudhri Khán.
Senior Sub-Assistant Surgeon Suhail Singh, R. B.

Order of British India, 2nd Class.

Subedár Jagat Singh.
Subedár-Major Bakhshísh Singh.
Honorary Lieutenant Rissaldár-Major Misri Khán.
Rissáldár-Major Hukam Singh.
Rissáldár Sajawál Khán.
Rissáldár-Major M. Muhammad Hayát Khán.
Ressáidár Mazhar Ali Khán.
Rissáldár Muhammad Haníf.

APPENDIX I-D.

RETIRED MILITARY OFFICERS OF COMMISSIONED RANK.

List of Honorary Captains.

1. Sardár Bahádur Honorary Captain Mangal Singh of Chak No. 25, S. B., Post Office Bhagtanwala.
2. Honorary Captain Lehna Singh of Chak No. 94, N. B., Post Office Sargodha.
3. " " Naráin Singh of No. 131, S. B., Post Office Hundewáli.
4. " " Maghar Singh of Chak No. 91, S. B., Post Office Mithalak.
5. " " Sundar Singh of Chak No. 119, S. B., Post Office Hundewáli.
6. " " Muhammad Amín Khán of Aminabad, Post Office Sadr Shahpur.
7. " " Ahmad Yár Khán of Hadáli, Post Office Hadáli.
8. " " Nawáb Muhammad Mubáriz Khán of Jahán abad.

Honorary Lieutenants.

1. Honorary Lieutenant Sáwan Singh of Chak No. 109, S. B., Post Office Sargodha.
2. " " Misri Khán of Mitha Tiwána, Post Office Mitha Tiwána.

Rissáldar-Majors.

1. S. Hukam Singh of Chak No. 38, S. B., Post Office Sargodha.
2. Sher Báz Khán of Chak No. 158, N. B., Post Office Sillánwáli.
3. Malik Muhammad Hayat Khán of Hadáli, Post Office Hadáli.
4. Jai Singh of Chak No. 155, N. B., Post Office Sillánwáli.
5. Niáz Muhammad Khán of Chak No. 22, S. B., Post Office Bhagtánwála.
6. Saadat Khán of Chak No. 22, S. B., Post Office Bhagtánwála.

Subedár-Majors.

1. Rám Singh of Chak No. 115, S. B., Post Office Hundewáli.
2. Ghani Khán of Chak No. 38, N. B., Post Office Mithalak.
3. Muhammad Ali Khán of Chak No. 118, N. B., Post Office Dera.
4. Fateh Singh of Chak No. 120, S. B., Post Office Hundewáli.
5. Kesar Singh of Chak No. 91, S. B., Post Office Mithalak.
6. Gul Muhammad Khán of Chak No. 72 A., S. B., Post Office Bhagtánwála.
7. Nihál Singh of Chak No. 127, S. B., Post Office Hundewáli.
8. Bhagwán Singh of Chak No. 129, S. B., Post Office Hundewáli.
9. Fazal Shah of Chak No. 13, S. B., Post Office Kot Moman.
10. Khushál Singh of Chak No. 119, N. B., Post Office Dera.
11. Rám Singh of Chak No. 128, S. B., Post Office Hundewáli.

Ressaldárs.

1. Nizám Dín of Chak No. 158, N. B., Post Office Sillánwáli.
2. Yaqub Ali Khán of Chak No. 158, N. B., Post Office Sillánwáli.
3. Khushál Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
4. Akbar Ali of Chak No. 80, S. B., Post Office Bhagtánwála.
5. Alam Khán of Chak No. 80, S. B., Post Office Bhagtánwála.
6. Mazhar Ali Khán of Chak No. 80, S. B., Post Office Bhagtánwála.
7. Hayat Ullah Khan of Chak No. 22, S. B., Post Office Bhagtánwála.
8. Fateh Muhammad Khán of Chak No. 80, S. B., Post Office Bhagtánwála.
9. Juma Khan of Chak No. 80, S. B., Post Office Bhagtánwála.
10. Suchet Singh of Chak No. 123, S. B., Post Office Hundewáli.
11. Hákim Singh of Chak No. 38, S. B., Post Office Sargodha.
12. Sháhzáda Jahángír of Chak No. 22, N. B., Post Office Bhalwal.
13. Sher Báz Khán of Katha Misrál, Post Office Katha Misrál.
14. Muhammad Ismail Khán of Jamáli, Post Office Jamáli.
15. Sajáwal Khán of Kufri, Post Office Kufri.
16. Khán Muhammad Khán of Hamoka, Post Office Hamoka.
17. Chirágh Khán of Mitha Tiwána, Post Office Mitha Tiwána.
18. Sikandar Khán of Mitha Tiwána, Post Office Mitha Tiwána.
19. Muhammad Hayát Khán of Hadáli, Post Office Hadáli.
20. Núr Khán of Bhukhi, Post Office Nowshehra.

Subedárs.

1. Kesar Singh of Chak No. 91, N. B., Post Office Sargodha.
2. Kishan Singh of Chak No. 89, N. B., Post Office Sargodha.
3. Buláka Singh of Chak No. 89, N. B., Post Office Sargodha.
4. Nek Muhammad of Chak No. 112, N. B., Post Office Dera.
5. Guláb Khán of Chak No. 116, N. B., Post Office Dera.
6. Allah Ditta Khán of Chak No. 118, N. B., Post Office Dera.
7. Bahádur Ali of Chak No. 122, N. B., Post Office Dera.
8. Kirpál Singh of Chak No. 64, S. B., Post Office Kot Moman
9. Pír Dád Khán of Chak No 62, S B., Post Office Kot Moman.
10. Ghulám Muhammad Khán of Chak No. 80, S. B., Post Office Bhagtánwála.
11. Rang Shah of Chak No. 107, S. B., Post Office Sargodha.
12. Attar Singh of Chak No. 133, S. B., Post Office Hundewáli.
13. Allah Dád Khán of Chak No. 129, N. B., Post Office Dera.-

14. Habíb Shah of Chak No. 114, S. B., Post Office Sillánwáli.
15. S. Suhel Singh of Chachar, Post Office Shahpur Sadar.
16. Sáwan Singh of Chak No. 119, N. B., Post Office Dera.
17. Fatteh Khán of Chak No. 114, S. B., Post Office Sillánwáli.
18. Jafar Khán of Chak No. 114, S. B., Post Office Sillánwáli.
19. Bhola Shah of Chak No. 114, S. B., Post Office Sillánwáli.
20. Ishar Singh of Chak No. 113, S. B., Post Office Sillánwáli.
21. Wisákha Singh of Chak No. 115, S B., Post Office Hundewáli.
22. Maya Singh of Chak No. 115, S B., Post Office Hundewáli.
23. Wadháwa Singh of Chak No. 115, S. B., Post Office Hundewáli.
24. Lábh Singh of Chak No. 115, N. B., Post Office Dera.
25. Sher Singh of Chak No. 115, N. B., Post Office Dera.
26. Pála Singh of Chak No. 123, S. B., Post Office Hundewáli.
27. Jagat Singh of Chak No. 124, S. B., Post Office Hundewáli.
28. Waryám Singh of Chak No 126, S. B., Post Office Hundewáli.
29. Lehna Singh of Chak No. 126, S. B., Post Office Hundewáli.
30. Dewa Singh of Chak No. 126, S. B., Post Office Hundewáli.
31. Naráin Singh of Chak No. 126, S. B., Post Office Hundewáli.
32. Nand Singh of Chak No. 127, S. B., Post Office Hundewáli.
33. Mahán Singh of Chak No. 128, S. B., Post Office Hundewáli.
34. Harnám Singh of Chak No 128, S. B., Post Office Hundewáli.
35. Jawála Singh of Chak No. 128, S. B., Post Office Hundewáli.
36. Sáwan Singh of Chak No. 129, S. B., Post Office Hundewáli.
37. Sewa Singh of Chak No. 129, S. B., Post Office Hundewáli.
38. Amar Singh of Chak No. 129, S. B., Post Office Hundewáli.
39. Bír Singh of Chak No. 129, S. B., Post Office Hundewáli.
40. Bishan Rám of Chak No. 129, S. B., Post Office Hundewáli.
41. Ralia Singh of Chak No. 129, S. B., Post Office Hundewáli.
42. Sáwan Singh of Chak No. 131, S. B., Post Office Hundewáli.
43. Nawáb Khán of Chak No. 132, S. B., Post Office Hundewáli.
44. Pír Bakhsh of Chak No. 132, S. B., Post Office Hundewáli.
45. Ahmad Bakhsh of Chak No. 132, S. B., Post Office Hundewáli.
46. Chaudhri Khán of Chak No. II, M. L., Post Office Bhalwal.
47. Fatteh Dín Khán of Chak No. 7, S. B., Post Office Kot Moman.
48. Muhabat Khán of Chak No. 8 A., S. B., Post Office Kot Moman.
49. Zard Ali Khán of Chak No. 8 A., S. B., Post Office Kot Moman.
50. Rúr Singh of Chak No. 120, S. B., Post Office Hundewáli.
51. Natha Singh of Chak No. 120, S. B., Post Office Hundewáli.
52. Muhammad Ali Khan of Chak No. 118, N. B., Post Office Dera.
53. Arjan Singh of Chak No. 120, Post Office Hundewáli.
54. Jiwan Singh of Chak No. 120, Post Office Hundewáli.
55. Pesháwra Singh of Chak No. 120, Post Office Hundewáli.
56. Muhammad Khán of Padhrar, Post Office Pail.
57. Muhammad Sharíf of Fateh Muhammad Wála, Post Office Bhera.
58. Muhammad Khán of Khura, Post Office Khura.

Wardi-Major.

1. Bahádur Khán of Kaliánpur, Post Office Miáni.
2. Fateh Muhammad Khán of Fateh Muhammad Wála, Post Office Bhera.

Ressáidárs.

1. Muhammad Sharíf Khán of Fateh Muhammad Wála, Post Office Bhera.

2. Samundar Khán of Chak No. 153, N. B., Post Office Sillánwáli.
3. Attar Singh of Chak No. 155, N. B., Post Office Sillánwáli.
4. Wasta Singh of Chak No. 155, N. B., Post Office Sillánwáli.
5. Abdul Kháliq of Chak No. 22, S. B., Post Office Bhagtánwála.
6. Mangal Singh of Chak No. 23 A., S. B. Post Office Bhagtánwála.
7. Khushál Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
8. Devi Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
9. Bahádur Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
10. Partáb Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
11. Wadháwa Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
12. Thákar Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
13. Sapúran Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
14. Sundar Singh of Chak No. 25, S. B., Post Office Bhagtánwála.
15. Hari Singh of Chak No. 38, S. B., Post Office Sargodha.
16. Rám Sahái of Chak No. 42, S. B., Post Office Sargodha.
17. Lál Singh of Chak No. 42, S. B., Post Office Sargodha.
18. Malik Muzaffar Khán of Chak No. 188, N. B., Post Office Wadhi.
19. Haq Niwáz Khán of Chak No. 80, S. B., Post Office Bhagtánwála.
20. Shah Wali Khán of Chak No. 188, N. B. Post Office Wadhi.
21. Jiwand Singh of Chak No. 23 A, S. B., Post Office Bhagtánwála.
22. Alam Khan of Hamoka, Post Office Hamoka.
23. Gul Jahán Khán of Hadáli, Post Office Hadáli.
24. Ismail Khán of Jamáli, Post Office Jamáli.
25. Sher Ali Khán of Mitha Tiwána, Post Office Tiwána.

Jamadárs.

1. Shahzada Abdul Qádir of Chak No. 22, S. B., Post Office Bhagtánwála.
2. Sudha Singh of Chak No. 25, S. B., Post Office Bhagtánwála.
3. Dhián Singh of Chak No. 25, S. B., Post Office Bhagtánwála.
4. Parabh Diál of Chak No. 42, S. B., Post Office Sargodha.
5. Gurmukh Singh of Chak No. 115, S. B., Post Office Hundewáli.
6. Hákim Singh of Chak No. 115-A, S. B., Post Office Hundewáli
7. Qásim Shah of Chak No. 116, S. B., Post Office Hundewáli.
8. Wazír Beg of Chak No. 116, S. B., Post Office Hundewáli.
9. Karím Bakhsh of Chak No. 116, S. B., Post Office Hundewáli.
10. Hussain Bakhsh of Chak No. 132, S. B., Post Office Hundewáli.
11. Rám Singh of Chak No. 132, S. B., Post Office Hundewáli.
12. Rám Kishan of Chak No. 132, S. B., Post Office Hundewáli.
13. Budha Khán of Chak No. 3, N. B., Post Office Kot Momaṅ.
14. Muhammad Hayat Khán of Chak No. 3, S. B., Post Office Kot Moman.
15. Ishar Singh of Chak No. 120, S. B., Post Office Hundewáli.
16. Ghulám Muhammad Khán of Chak No. 35, N. B., Post Office Mitha Lak.
17. Malik Ismail Khán of Mitha Tiwána, Post Office Mitha Tiwána.
18. Sher Singh of Chak No. 38, S. B., Post Office Sargodha.
19. Sar Baland Khán of Jamáli, Post Office Jamáli.
20. Muhammad Azim Khán, of Jamáli, Post Office Jamáli.
21. Jahán Khán of Jamáli, Post Office Jamáli.
22. Sada Rang of Chak No. 155, N. B., Post Office Sillánwáli.
23. Amrík Singh of Chak No. 155, N. B., Post Office Sillánwáli.
24. Himat Khán of Katha Misrál, Post Office Katha Misrál.

25. Wasáwa Singh of Chak No. 64, S. B., Post Office Kot Moman.
26. Kesar Singh of Chak No. 129, S. B., Post Office Hundewáli.
27. Jaswant Singh of Chak No. 129, S. B., Post Office Hundewáli.
28. Amír Ali Khán of Chak No 38, N. B., Post Office Mitha Lak.
29. Saif Ali Khán of Chak No 118, N. B., Post Office Bhera.
30. Gurmukh Singh of Chak No. 133, S. B., Post Office Hundewáli.
31. Bahádur Khán of Kaliánpur, Post Office Miáni.
32. Ganda Singh of Chak No. 89, N. B., Post Office Sargodha.
33. Partáb Singh of Chak No. 23 A., S. B., Post Office Bhagtánwála.
34. Parem Singh of Chak No. 28, S. B., Post Office Sargodha.

APPENDIX I-E.

RETIRED CIVIL OFFICERS ENTITLED TO A SEAT IN DARBAR.

1. Lala Naráin Dás, Munsiff, Bhera.
2. M. Hari Chand, Tahsíldar, Miáni.
3. Lála Mohan Lál, Inspector of Police, Lilla (District Jhelum).
4. Díwán Lakhmi Dás, Extra Judicial Assistant Commissioner, Bhera.
5. M. Devi Dyál, Extra Judicial Assistant Commissioner, Miáni.
6. Lála Brij Lal, Assistant Surgeon, Bhera.
7. *Lála Khazán Chand, Civil Surgeon, Sháhpur.
8. M. Chirágh-ud-Dín Khán, Inspector of Police, Khusháb.
9. M. Maula Bakhsh, Head Master, Normal School, Multán, Jandiyála (District Gujránwála).

*Died since.

APPENDIX I-F.

LIST OF MEMBERS OF MUNICIPAL AND NOTIFIED AREA COMMITTEES.

Bhera Municipal Committee.

Appointed by official designation—

1. Tahsíldár, Bhera, *President.*
2. Head Master, Government High School, Bhera.
3. Assistant Surgeon, Bhera.

Appointed by nomination—

4. Shaikh Ghulám Nabi.
5. Díwán Bahádur Jawáhar Mal.

Appointed by election—

6. Mián Muhkam Dín.
7. Shaikh Muhammad Mubárik.
8. Pír Ghulám Jíláni.
9. Malik Devi Dayál.
10. Pír Bádsháh.
11. Lála Hari Rám Shah.
12. Seth Abdul Rashíd.
13. Lála Bálak Rám
14. Lála Ralla Rám.
15. Mián Muhammad Azam.

Khusháb Municipal Committee.

Appointed by official designation—

1. Sub-Assistant Surgeon.

Appointed by nomination—

2. Sardár Bahádur Khán, *President.*
3. Malik Tára Chand.
4. Lála Ganpat Rái.
5. Mián Ghulám Hussain.
6. Qázi Ghulám Muhammad.
7. Bhái Tulsi Dás.
8. Mián Chirágh Dín.

Sáhíwál Municipal Committee.

Appointed by nomination—

1. Pír Fíroz Dín Shah.
2. Sayad Fazal Hussain.
3. Lála Narshingh Dás Wásdeo.
4. Lála Chetan Dás.
5. Mián Muhammad Hussáin.
6. Sardár Muhammad Chirágh Khán, *President.*
7. Malik Gur Sahái
8. Maulvi Shams-ud-Dín.
9. Chaudhri Rádha Kishan.

Miáni Municipal Committee.

Appointed by official designation—

1. Náib Tahsíldár, Bhera, *President.*

Appointed by nomination—

2. Malik Sher Khán, Bharath.
3. Mufti Ghulám Murtaza.

Appcinted by election—

4. Lála Gurdás Ram.
5. Lála Síta Ram.
6. Shaikh Muhammad Ramzán.
7. Lála Beli Rám.
8. Mián Fazal Ahmad.
9. B. Jagan Náth.

Sargodha Municipal Committee.

Appointed by official designation—

1. Deputy Commissioner, Shahpur, *President.*
2. Senior Assistant Commissioner or Extra Assistant Commissioner.
3. Executive Engineer, Public Works Department (Buildings and Roads).
4. Executive Engineer, 2nd Division, Lower Jhelum Canal, Sargodha.

Appointed by nomination—

5. Bhái Rám Singh.
6. Mián Sáleh Muhammad, Zaildár.
7. Shahzáda Ghulám Muhammad.
8. Rái Sáhib Lála Ganesh Dás, Contractor.
9. Lála Rám Jas.
10. Lála Súraj Balrám, Bar.-at-Law.
11. Dr. Harbans Singh.
12. Shaikh Abdul Ghani, Pleader.

Shahpur Civil Station Notified Area Committee.

1. Sub-Divisional Officer, Khusháb at Shahpur, *President.*
2. Assistant Sugeon, Shahpur.
3. Tahsíldár, Shahpur.

Shahpur City Notified Area Committee.

Appointed by official designation—

1. Tahsíldár, Shahpur, *President.*

Appointed by nomination—

2. Lála Díwán Chand, Pleader.
3. Sayad Najaf Shah.
4. Mián Dost Muhammad.
5. Lála Thákar Dás.

Bhalwal Notified Area Committee.

Appointed by official designation—

1. Náib Tahsíldár, Bhalwal, *President.*

Appointed by nomination—

2. Bhái Chainchal Singh.
3. Lála Faqír Chand.
4. Malik Sardar Khán, Nún.
5. Sayad Alam Shah.

Phularwán Notified Area Committee.

Appointed by official designation—

1. Tahsíldár, Bhera, *President.*

Appointed by nomination—

2. Chaudhri Fazal Ahmad, Lambardár, Ghak No 1, N. B.
3. Lála Lakhmi Dás, Commission Agent.

Sillánwáli Notified Area Committee.

Appointed by official designation—

1. Tahsíldár, Sargodha, *President.*
2. Chaudhri Muhammad Khán of Mangowála.
3. Chaudhri Muhammad Khán Bhatti, Zaildár, 131, N. B.
4. Bhái Guláb Singh of Sillánwáli.
5. Bhái Harbans Singh of Sillánwáli.

APPENDIX I-G.

List of Members of the District Board of Shahpur.

Tahsíl representatives.

Tahsíl Shahpur—

1. Chaudhri Ghulám Muhammad, Halqadár of Murádwála.
2. Chaudhri Allah Dád, Halqadár of Chachar.
3. Sayad Najaf Shah, Halqadár of Shahpur.
4. Lála Hari Rám of Jhawárián.
5. Mian Muhammad Hayát, Halqadár of Sabowál.
6. Chaudhri Muhammad Khan, Halqadár of Kot Choghatta.
7. Pír Násir-ud-dín Shah, Halqadár of Jahániánshah.
8. Chaudhri Rádha Kishan, Honorary Munsiff of Sáhíwál.

Tahsíl Bhera—

9. Chaudhri Táj Mahmúd, Zaildár of Mela.
10. Mián Sher Ali, Zaildár of Bucha Kalán.
11. Sayad Alam Shah, Zaildár of Chak No. 3, N. B.
12. Malik Sher Khán, Halqadár of Bharath.
13. Sayad Ali Haidar Shah, Zaildár of Bhera.
14. Chaudhri Nathu, Halqadár of Dhal.
15. Bhái Chainchal Singh of Bhalwal.
16. Chaudhri Shah Muhammad, Zaildár of Dhori.
17. Mián Fazal Dín, Halqadár of Midh Ránjha.

Tahsíl Sargodha—

18. Bhái Hákim Singh, Zaildár of Chak No. 48, N. B.
19. Subedár Sher Singh, Zaildár of Chak No. 115, S. B.
20. Rissaldár Khushál Singh, Zaildár of Chak No. 23 A., S. B.
21. Bhái Jaimal Singh, Zaildár of Chak No. 154, N. B.
22. Mián Sáleh Muhammad, Zaildár of Sargodha.
23. Chaudhri Muhammad Khán Bhatti, Zaildár of Chak No. 131, N. B.
24. Chaudhri Ghulám Muhammad, Lambardár, Chak No. 43, N. B.
25. Malik Amír Haidar, Zaildár of Chak No 187, N. B.
26. Rái Bahádur Hari Singh of Chak No. 126, S. B.

Tahsíl Khusháb—

27. Malik Muzaffar Khán, Halqadár of Khabakki.
28. Malik Muhammad Sher, Halqadár of Hardo Sodhi.
29. Sardár Bahádur Khán, Halqadár of Khusháb.
30. Malik Arab Khán, Halqadár of Katha Saghrál.
31. Khán Sáhib Malik Baland Khán of Kufri.
32. Malik Muhammad Sher, Tiwána of Mitha Tiwána.
33. Malik Lashkar Ali of Jamáli.
34. Malik Khán Muhammad Khán of Hamoka.

Additional members.

Appointed by official designation—

35. Deputy Commissioner.
36. Superintendent of Police.
37. Sub-Divisional Officer, Khusháb, at Shahpur.

38. Civil Surgeon.
39. Superintendent, Army Remount Department, Jhelum Canal Colony Circle, Sargodha.
40. Executive Engineer, II Division, Lower Jhelum Canal, Sargodha.
41. Senior Assistant Commissioner or Extra Assistant Commissioner at headquarters.
42. Revenue Assistant.
43. Tahsíldár, Shahpur.
44. Tahsíldár, Bhera.
45. Tahsíldár, Khusháb.
46. Tahsíldár, Sargodha.
47. District Inspector of Schools.

Appointed by name—

48. Hon'ble the Honorary Captain Malik Sir Umar Hayát Khán, Tiwána, K.C.I.E., M.V.O., of Kálra.
49. Nawáb Malik Mubáriz Khán, Tiwána, of Jahánabad.
50. Malik Muzaffar Khán, Tiwána, of Chak Muzaffarabad.
51. Sardár Muhammad Chirágh Khán of Sáhíwál.*
52. Malik Sher Muhammad Khán, Nún, of Kot Hákim Khán.
53. Díwán Bahádur *Díwán* Jawáhar Mal, Honorary Magistrate of Bhera.*
54. Honorary Captain Sardár Bahádur Muhammad Amín Khán of Salímabad.

*Since died.

APPENDIX I-H.

List of the Kurshi Nashins of the Shahpur District.

Tahsíl Sargodha.

1. Mián Sálih Muhammad of Chokera.
2. Muhammad of Chak No. 131, N. B.
3. Sardár Khán of Chak No. 36, S. B.
4. Amír Haidar of Chak No. 187, N. B.
5. Diwa Singh of Chak No. 117, S B.
6. Bhái Kartár Singh of Sargodha.
7. Hakim Khán of Chak No. 35, S. B.
8. Ghulám Muhammad of Chak No. 43, N. B.
9. Hákim Singh of Chak No. 48, N. B.
10. Chaudhri Ghulám Qádir of Chak No. 84, S. B.
11. Chaudhri Fateh Dín of Chak No. 101, S. B.
12. Lála Goverdhan Dás of Sargodha.
13. Kot Daffadár Jaimal Singh of Sobbaga.
14. Daffadár Hari Singh of Chak No. 157, N. B.

Tahsíl Bhera.

1. Sultán Muhammad of Jalla.
2. Ghulám Nabi of Bhera.
3. Sher Khán of Bharath.
4. Táj Mahmúd of Mela.
5. Ghulám Muhammad of Hazára Miána.
6. Sher Ali of Bucha Kalán.

7. Alam Shah of Chak No. 3, N. B.
8. Bhái Chanchal Singh of Mandi Bhalwal.
9. Fazal Ahmad of Chak No. 1, N. B.
10. Mián Fazl Iláhi of Jholpur.
11. Ali Haidar Shah of Bhera.
12. Mián Ghulám Muhammad of Upi.
13. Fazl Ahmad of Dhingránwáli.

Tahsíl Shahpur.

1. Feroz Dín Shah of Thatti Shaháni.
2. Wír Singh of Hukampur.
3. Dewán Chand of Chak Músa.
4. Sayad Najaf Shah of Shahpur City.
5. Alla Dad Khán of Chacbar.
6. Malik Khán Mohammad of Khawájabad.
7. Karam Chand of Chak Músa.
8. Ghulám Muhammad of Murádwála,
9. Muhammad Khán of Mangowála Kalán.
10. Muhammad Ali of Jalálpur Jadíd.
11. Muhammad Khán of Kot Choghata.
12. Fateh Khán of Sáhíwál.
13. Jalál Khán of Machhar Khadi.
14. Muhammad Yár of Kalyár.
15. Bhái Híra Singh of Farúka.
16. Pír Nasír-ud-dín Shah of Jahánián Shah.
17. Muhammad Yusif Khán of Sada Kamboh.
18. Pandit Devki Nandan of Shahpur City.
19. Hari Rám of Jhawarián.
20. Dewán Chand, Civil Surgeon's Clerk, of Shahpur City.

Tahsíl Khusháb.

1. Pír Satár Shah of Pail.
2. Ghulám Muhammad of Hamoka.
3. Arab Khán of Kattha.
4. Alam Khán of Khusháb.
5. Qázi Ghulám Muhammad of Khusháb.
6. Sarfaráz Khán of Jaba.
7. Sultán Ahmad of Kund.
8. Muzaffar Khán of Khabakki.
9. Bhái Sujan Singh of Hadáli.
10. Muhammad Amír of Amb.
11. Malik Sikandar Khán of Hadáli.
12. Khán Muhammad of Rangpur Baghur.
13. Malik Karam Iláhi of Uchháli.
14. Sher Muhammad of Bandiál.
15. Ahmad Khán of Kufri.
16. Malik Tára Chand of Khusháb.
17. Mohammad Sher of Hardo Sodhi.
18. Jahán Khán of Sher Garh.
19. Ratan Chand of Hadáli.
20. Ghaus Muhammad of Kufri.
21. Muhammad Khan of Uchháli.
22. Jahán Khán of Sabrál.

APPENDIX II.

(Revised Edition.)

List of Zaildars and Inamkhors of Sargodha Tahsil.

Serial No.	Name of zail.	Name of Zaildár.	Grade.	Emoluments.	Name of Inámkhor.	Grade.	Emoluments.
				Rs.			Rs.
1	Ajnála ...	Sulathi Khán of 28, N. B.	First ...	300	Surab Khán of 56, N. B.	Third	80
2	Sargodha ...	Sáleh Muhammad of Chowkera.	Do. ...	300	1. Ghulám Muhammad of 43, N. B.	First ...	120
					2. Ghulám Nabi of 47, N. B.	Second	100
3	Bhagtánwáli...	Khushhál Singh of 23 A., S.B.	Do. ...	300	Prem Singh of 28, S. B.	First ...	120
4	Dharema ...	Kádir Bahksh of Dharema.	Third...	200	...	...	...
5	Kirána ...	Fateh Khán of 101, S. B.	Second	250	1. Boga of 103, S. B.	Third	80
					2. Amír of Asiánwáli.	Do.	80
6	Rorala ...	Hákim Singh of 48, N. B.	First ..	300	1. Lábh Singh of 101, N. B.	Second	100
					2. Akbar Ali of 109, N. B.	Third	80
7	Silánwáli ..	Muhammad Bhati of 131, N. B.	Do. ...	300	Mahbúb Alam of 126, N. B.	Do.	80
8	Tinoka ...	Sher Singh of 115, S. B.	Do. ...	300	Pír Dád of 62, S. B.	Second	100
9	Sarsaman ...	Khuda Bakhsh of 124, N. B.	Third	200	1. Dewa Singh of 117, S. B.	Do.	100
					2. Jahán Khán of 111, N. B.	Do.	100
10	Tírkota ...	Amír Haider of 187, N. B.	Second	250	...	...	
11	Hadda ...	Ghulám Qádir of 84, S. B.	Third	200	Háji Muhammad of 90, S. B.	Third	80
12	Kandiánwála	Khurshaid Alam of 36, S. B.	Do. ...	200	1. Hákim Khán of 35, S. B	Second	100
					2. Rám Sahái of 42, S. B.	Do.	100
13	Lakhuána ...	Muhammad Kalyár of 147, N. B.	Do.	200	Wasáwa of 133, N. B.	Third	80
14	Sobhaga ..	Jaimal Singh of 154, N. B.	Second	250	Híra Singh of 157, N. B.	Second	100
15	Marri ...	Nawab Khuda Bakhsh of [Khawajabad].	Third	200	...	...	
		Total	...	3,750	...	...	1,600
		Grand Total ...			5,350		

LIST OF ZAILDARS AND INAMKHORS OF KHUSHAB TAHSIL.

Serial No.	Name of Zail.	Name of Zaildár.	Grade.	Emoluments.	Name of Inámkhor.	Grade.	Emoluments.
				Rs.			Rs.
1	Khusháb .	Sardár Bahádur Khan of Khusháb.	First	300	Sardár Fateh Khán of Khusháb.	Third...	80
2	Hamoka ...	Muhammad Khán of Hamoka.	Third...	200	Pír Shah of Jalálpur.	First ...	120
3	Kund ...	Sultán Ahmad of Kand.	First ...	300	Suráb Khán of Wahir.	Third ..	80
4	Hadáli ...	Sikandar Khán of Hadáli.	Second	250	...	...	..
5	Mitha Tiwána	Malik Muhammad Sher of Mitha Tiwána.	Do.	250	..	...	...
6	Sher Garh ...	Jahán Khán of Shergarh.	Do.	250	Sardár Fateh Khán of Girot.	Second	100
7	Tetri ...	Lál Khán of Tetri	Do.	250	1. Amír of Jaura 2. Fazal Iláhi of Majoka.	Do. Third .	100 80
8	Jamáli ...	Atta Muhammad of Jamáli.	Do.	250	...	...	...
9	Núrpur ...	Jawáhir Singh of Núrpur.	Third...	200	...	...	...
10	Rangpur ...	Khán Muhammad of Rangpur.	Do. ...	200	...	...	...
11	Uttara ...	Sultán Khán of Uttara.	Do. ...	200	1. Malik Banda of Bandiál. 2. Dost Muhammad of Warchha. 3. Khán Muhammad of Jabbi. 4. Ghulám Muhammad of Uttra. 5. Ahmad Khán of Golewáli.	Second Do. Third... Do. ... Do. ...	100 100 80 80 80
12	Katha Misrál...	Rája Sher Báz Khán of Katha Misrál.	Do. ...	200	...	...	...
13	Katha Sagrál	Sultán Arab of Katha Sagrál.	First...	300	Báz Khán of Daiwal.	Third...	80
14	Pail ..	Pír Chan Pír of Pail.	Do. ...	300	...	...	...
15	Jaba ..	Sarfaráz Khán of Jaba.	Second	250	...	...	...

Serial No.	Name of Zail.	Name of Zaildár.	Grade.	Emoluments.	Name of Inámkhor.	Grade.	Emoluments.
				Rs.			Rs.
16	Sodhi Jaiwáli	Chan Pír of Sodhi Jaiwáli.	Third...	200	...	...	..
17	Khabeki ...	Muzaffar Khán of Khabeki.	Second	250	...	...	...
18	Naushehra ...	Fateh Sher of Naushehra.	Third...	200	...	...	...
19	Hardo Sodhi	Muhammad Sher of Hardo Sodhi.	Do. ...	200	...	...	...
20	Kufri ...	Ahmad Khán of Kufri.	Do. ...	200	Khán Sáhib Buland Khán of Kufri.	First ...	120
21	Uchhali ...	Karam Iláhi of Uchháli.	First ...	300	...	...	...
22	Anga ...	Ghulám Muhammad of Anga.	Second	250	...	...	...
23	Amb ...	Muhammad Amír of Amb.	Third...	200	...	...	...
		Total ..	...	5,500	..	...	1,200
		GRAND TOTAL ...	...	...	6,700		

LIST OF ZAILDARS AND INAMKHORS OF SHAHPUR TAHSIL.

1	Jhawarián ..	1. Muhammad Yúsaf of Sada Kamboh.	Third...	200	1. Fateh Khán of Bharath.	First	150
		2. Nawáb Malik Khuda Bakhsh of Khawajabad.	Honorary	...	2. Lál Khán of Jhawarián.	Second	100
2	Kot Bhái Khán	1. Rána Allah Dád of Chachar.	Second	250	1. Ghulám Muhammad of Chak Músa.	First	120
		2. Hon'ble Sir Malik Umar Hayát Khán, K.C.I.E., C.I.E., M.V O.	Honorary	...	2. Bhái Khán of Kot Phelwán.	Second	100
3	Shahpur ...	Sayyad Najaf Shah of Shahpur.	First ...	300	1. Jalál Khán of Aqil Shah.	First	150
					2. Malik Muzaffar Khán of Muzaffarabad.	Third	60

Serial No.	Name of Zail.	Name of Zaildár.	Grade.	Emoluments.	Name of Inámkhor.	Grade.	Emoluments.
				Rs			Rs.
4	Mangowál ...	Muhammad Khán of Mangowál.	Third ..	200	Fateh Khán of Kandan.	Second	100
5	Sabowál ...	1. Qureshi Muhammad Hayát of Sabowál.	First ...	800	1. Ghulám Hussain of Bunga Balúchán.	First	120
		2. Nawáb Malik Muhammad Mubáriz Khán of Jahánabad.	Honorary	...	2. Muhammad Ali of Jalálpur.	Second	100
					3. Sher Muhammad Khán of Tankiwála.	Third	80
6	Kot Chogetta	Muhammad Khán of Kot Chogetta	Third...	200	...	...	...
7	Thatti Shaháni	Feroz Dín Shah of Thatti Shaháni	Second	250	...	...	...
8	Sáhíwál ...	Sardár Fateh Khán, in place of Sardár Abdur Rahman Khán.	Third ..	200	...	...	...
9	Kote Gul ...	Muhammad Yár of Kot Gul.	Second	250	Jalál Khán of Vachhar Khadi.	Third	80
10	Murádwála ...	Ghulám Muhammad of Lathi of Murádwála.	Do.	250	...	...	...
11	Jahániánshah	Pír Sultán Ali Shah of Jahániánshah.	First ...	300	Mír Abdulla of Dhirkhánawála.	Third	80
		Total	...	2,700	...	...	1,260
		GRAND TOTAL	...		3,960		

LIST OF ZAILDARS AND INAMKHORS OF BHERA TAHSIL.

1	Kalyánpur ...	Bahádur Khán of Kalyánpur.	Third	200	Hayát Khán of Kot Ahmad Khán.	First	150
2	Miáni ...	Sher Khán of Bharath.	First	800	Ghulám Muhammad of Namtas.	Second	100
3	Bhera ...	Ali Haidar Shah of Alipur.	Third	200	...	...	...

Serial No.	Name of Zail.	Name of Zaildár.	Grade.	Emoluments.	Name of Inámkhor.	Grade.	Emoluments.
				Rs.			Rs.
4	Chakrám Dás	1. Nathu Khán of Dhal.	Second	250	...	...	...
		2. Malik Sher Muhammad Khán Nún of Kot Hákim Khán.	Hony.	...	...	...	...
5	Dhori ...	Shah Muhammad of Dhori.	Second	250	Fazal Ahmad of Chak No. 1, N. B.	Second	100
6	Bhalwal ...	Alam Shah of Chak No. 3, N. B.	First	300	Hákim Ali of Chak No. 9, N. B.	Do.	100
7	Shaikhupur ...	Haidar Ali of Chak No. 22, N. B.	Third	200	Baháwal Bakhsh of Chak No. 10, N. B.	Do.	100
8	Mela ...	*Táj Mahmúd of Mela.*	Second	250	Ghulám Muhammad of Wan.	Do.	100
9	Kot Moman ...	Sher Ali of Bucha Kalán.	Do.	250	Khuda Bakhsh of Kot Moman.	Do.	100
10	Lalyáni ...	Sher Khán of 20, S. B.	Do.	250	Sher Muhammad of Moruliánwála.	Do.	100
11	Ghari Kala ...	Hussain Muhammad of Ghari Kala.	Third	200	...	...	...
12	Jalla Makhdúm	Sultán Mahmúd of Jalla Makhdúm.	First	300	...	...	...
13	Gurna ...	Muhammad Khán of Gurna.	Second	250	Ali Akbar of Tálibwála.	Second	100
14	Midh Ránjha	Fazal Dín of Midh Ránjha.	Do	250	...	...	...
15	Badar ...	Rahmat Khán of Badar	Do.	250	Ghulám Muhammad of Miána Hazára.	First	150
		Total ...	...	3,700	...	...	1,100
		GRAND TOTAL ...	...	4,800			